

The
National
Locksmith

The National Locksmith®

\$5.00

CODES
'94 GM AA00-A999 PART 3
— page 126 —

September 1996
Volume 67, No. 9

**FIRE
BREATHING
FEROCITY**
PAGE 48

ALSO THIS MONTH
DHI
Bonus Supplement

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On The Cover

Reaching 10,000 degrees Fahrenheit, the thermal lance of today is not only portable but unstoppable as well, penetrating safe hardplate in seconds.



Editor/Publisher Marc Goldberg

Managing Editor Greg Mango

Art Director Jim Darow

Production Director Edgar Shindelar

Production Assistants Kim Fryer & Dave Krofel

Technical Editor Jake Jakubowski

Special Correspondent Bill Reed

Technical Writers Carl Cloud, Sal Dulcamaro, CML, Steve Gebbia, CML, Michael Hyde, Giles Kalvelage, Brian Kleiner, Ph.D., Jim Langston, Dale Libby, Tom Lynch, Tom Mazzone, Dave McOmie, Don Probasco, Sara Probasco, Robert Sieveking

Director of Sales & Marketing Jeffrey Adair

Advertising Account Manager Debbie Schertzing

Circulation Manager Tom Dean

Accounting Manager Diane DeGrace

Administrative Assistant Heather Isfan

National Publishing Co.

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Commentary

Do you listen to talk radio? I have been addicted to such shows since I was about 8 years old. I remember listening to an old crystal radio set in my grandparents' attic in West Chester, PA. The antenna was wire stretched out the window onto the branch of a 50 year old oak tree.

Talk radio is still going strong today. And by listening to programs like Rush Limbaugh, you get a good overview on the attitude of the American people. And lately, I have been hearing a recurring theme over and over again from many callers, and to tell you the truth, it is starting to make me mad!

How many times have you heard people complain that there is no *opportunity* left in America...that it is impossible to make a buck in this country any more?

I have heard every excuse imaginable for this horsehockey statement. "Too damn many immigrants have taken all the jobs." "The government has taxed all the opportunities away." I even heard one moron state that the world is so over populated today that no opportunities are left. (What an idiot! More people on Planet Earth means there are more *consumers* to buy things and that means *more opportunity* not less!!!)

We live in a time and a place where opportunities abound. Money is waiting to be made around every corner. Now, it may not seem so to you if you just follow along and do what every other locksmith does. But if you open your mind and get creative, I bet you can make more money this year than last year.

One locksmith came up to me at ALOA in New Orleans and showed me a sticker. It was a small rectangle with his business name, his phone number and it said "24 Hour Emergency Service." This locksmith printed up a bunch of these stickers. He then purchased 50 of the old style flat bar car opening tools.

He gave one tool to each cop in his local police department, and showed them how to use the tools. Well, we all know that these tools will only open a small percentage of cars today. Guess what? When the cops can't open most of the cars, who do you think they are referring the business to? The locksmith told me he is making more money on car openings than ever before. His inventiveness *created opportunity* for his business.

Here is another idea you might try in your own business: Dedicate four hours every week to visiting real estate agencies, insurance agents, apartment managers and local business owners. Hand them a business card, and on your way out just mention you'd be pleased to offer your services whenever needed. Perhaps you stop back in a couple of weeks and leave a coupon for a free key. In any case, the commercial business you seek is not hiding behind your bench nor is it lurking in the back of your van. The commercial business is in the hands of your local businessmen and women. When you shake those hands, they will take the trouble to dial *your* phone number when they need a locksmith!

Opportunity is knocking. Will you open the door?



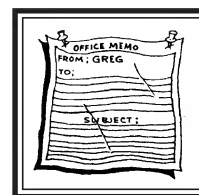
Marc Goldberg
Editor/Publisher

**Opportunity
is knocking!
Will you open
the door?**

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Marc Goldberg



Mango's Message



Greg Mango
Managing Editor

Where's the Beef?

My bags were packed, my plane ticket was in hand, my shoes were shined and I was ready to go. (That sounds like a song doesn't it?) It had been a year of preparation and I was consumed with excitement and anticipation. It was that time of year again and I was ready for it.

It was time for the 40th anniversary of the Associated Locksmiths of America (ALOA) trade show. I figured it would be one of the best and biggest ever. Well, I'm going to be politically incorrect here and tell you that it was far from achieving either of those goals. In fact, in my humble opinion, it was nothing short of a total disaster. This was very disheartening because I had always looked forward to the ALOA convention. It was a time when I had the opportunity to meet a number of fellow locksmiths, many of whom I had only talked to by phone. Not this time, however.

The trade show dates were July 25 through July 27, and on any one of those three days, I could have rolled a bowling ball down any of ten rows on the convention floor and would have been lucky to hit one person. In fact, I would have really needed to aim to accomplish that. There was simply very little attendance.

This fact is in no way a reflection of the work done by the ALOA staff and officers. They put their heart and soul into this trade show, doing many hours of thankless work and planning. Their efforts are to be commended. Unfortunately, sometimes even the most commendable efforts can produce less than desirable results. So was the case with this year's trade show.

The measure of a successful trade show is gauged in two ways, by the number of exhibitors and the number of show attendees. A really great trade show includes a large number of exhibitors and an abundance of attendees. A *really* great trade show includes all the above, plus the added bonus of being located in a pleasurable, exciting location. Unfortunately, this year's ALOA trade show included none of the above. The number of exhibitors was down. The attendees were almost non-existent, and it was located in - to put it politely - a cess-pool.

The location was New Orleans, Louisiana. When you think of New Orleans, you think of Mardi Gras, Bourbon Street and the French Quarter. The name New Orleans conjures images of celebration, festivities, food, fun and excitement. The host hotel for this year's ALOA convention was located just around the corner from the world famous Bourbon Street, which one would think depicted such an image. For some, maybe it did. After being there however, I must say that the name Bourbon Street didn't quite reflect the perception I had before being there. To get a better image of Bourbon Street, I would suggest that the name be changed to Decadence Drive.

New Orleans is a major tourist city with a great deal of convention bookings and a number of tourist attractions. However, Bourbon Street, is replete with numerous topless and bottomless bars featuring dancers of both sexes. Each location boasting their own brand of uncensored adult entertainment, with life sized (explicit) posters plastered on each establishment's exterior to lure the lascivious. I was with my wife and I must tell you, I was quite embarrassed, while she was more than uncomfortable, and I heard that comment from others as well. I'm not sure that the location was universally appreciated, even though there is also wonderful restaurants, gambling, and Jazz in the city.

Having said that, I do not think that New Orleans itself kept the people away. I think the attendance question is more complicated than that. Had the ALOA show been held in the same city ten or fifteen years ago, I bet the floor would have been packed with locksmiths, jostling for space to see the booths, and enjoying fellowship with each other. So more than likely, it wasn't the decadence of the Bourbon Street strip that kept the people away.

The character of the locksmithing industry has changed a great deal over the last fifteen years. Back then, most of us looked forward to the annual ALOA convention as one of the primary gathering places to meet and socialize with other locksmiths, see new products, gain education in our profession and maybe even to vacation with the family. It was more than just a trade show, it was an event.

The concept of an ALOA convention was simple. Gather together the manufacturers (and distributors who cared to attend), lay products out on tables, organize some classes and make room for the crowds. In other words, the concept was: *If we throw a trade show, they will come.* And people did, by the droves, but something has changed over the intervening years, and now the same old approach to a trade show is no longer working. Business as usual is lacking with excitement. Now, let me state (again) that ALOA cares deeply about this show, and really works harder than you might ever realize to make it a success. So then,

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what can the poor attendance be attributed too?

As I just stated, it does not come from lack of effort. However, I do think the area which could be tweaked to get the show back up to snuff, is in understanding that market conditions have dramatically changed over the course of time. In light of that, responding creatively to those changes is necessary.

Same old same old, just isn't working any more. Yes, fifteen years ago, or even ten, there were limited opportunities to see new products and to take classes on the local level. If a locksmith wanted to remain on the cutting edge of his profession, ALOA was the place to be. This is no longer the case.

Since that time, manufacturers are busier than ever putting on certification classes around the country, acquainting individuals to their product lines. Distributors have organized programs to educate their customers on topics as varied as installing electronics, to marketing classes for the locksmith. Local associations seem to conduct a wider array of classes than ever, teaming up with individuals like Bill Reed to promote free seminars. And, as always, local associations sponsor trade shows of their own.

So what can ALOA offer that no-one else offers in order to adapt to the changed conditions and regain the glory of years gone by? I think the answer is twofold. First, the need to travel across the country for a trade show is far less than in the past. Therefore, I think ALOA should consider the local draw to be of critical importance to attendance. To attract a better local draw, the shows need to be held in places where you can drive to within about six hours or so. Much more than that, and people don't want to drive.

If you draw a circle around New Orleans which represents about six hour's of driving time (approximately 300 miles or so), you will find that almost 50% of that circle covers water (the Gulf of Mexico) and the only major city within the other 50% of the circle is Houston, Texas. There are few highly populated areas within a 300 mile range of New Orleans. In fact, there are few highly populated areas within 500 miles of New Orleans. If people can drive to ALOA and reduce their expenses, they will be much more inclined to come.

Also in this vein, perhaps ALOA should consider reducing the fee currently charged to attend the show. For example: A member is free if registered before 6/28 (convention dates were 7/21 to 7/27). After 6/28 a member is charged \$25 to attend. A non-member is \$25 before 6/28 and \$35 after. A Child 6-14 years of age and spouse is \$5 before 6/28 and \$10 after. A child 15-18 years of age is \$10 before 6/28 and \$15 after. These charges seem to do nothing but discourage one from attending, rather than encouraging one to participate. Besides, once a non-member locksmith is at the show, maybe he would appreciate all the benefits of membership on display at the ALOA booth and might well choose to join. In turn, the other show exhibitors will also benefit from his attendance.

No matter what, there are people who will fly in for ALOA if the level of excitement associated with the show is increased, which brings me to the second area that needs to be examined...making the show more unique.

ALOA is still ALOA. It is the only national show we have, and I believe we all want to see it succeed. I bet most exhibitors would gladly donate a couple of products which could then be given out as door prizes. Just post the winner's names in the ALOA booth and they can collect their prize. The exhibitors can be recognized for their contribution and thanked by name in the show program. The attendees will spend a lot more time on the exhibit floor and in the ALOA booth (again seeing all the displays on why they should join), and a P.A. system would not be needed to interrupt and annoy. Plus, a sense of excitement is created.

Right now, it is prohibited to sell merchandise over the counter at the show. This means you can only place an order at the show which then must be mailed to you. I think it might interest a lot more locksmiths if those exhibitors who want to sell at the show could sell. This way the locksmiths get the instant gratification of walking out with their new toys. Nobody likes to wait.

In the area of education, one idea that might help could be the addition of some free mini-classes. Notice I didn't say mini-seminars. Mini-seminars refer to sales seminars, not educational classes. So much free education is currently available, that to keep attendance up, I think ALOA needs to consider the option of getting into that game in some fashion to not only regain interest, but also to reverse what has appeared to be something of a decline in attendance over the last five years.

Finally, I think ALOA might reconsider the show days of Thursday, Friday and Saturday. I don't have to tell you that most locksmiths work those days, and more people will come to the show if a Sunday is included. Sunday is typically the slowest work day of the week, and would encourage someone who has nothing better to do to attend the show, even if he or she hadn't originally planned too. These suggestions are but a few points to ponder.

Why do I seem to care so much about the ALOA show? It's because this industry *needs* and *wants* the ALOA show to be a big annual success. Everyone benefits if it is. ALOA however, is not the only trade show that could benefit from a shot of Adrenaline. Locksmiths today have more choices than ever, but with some added imagination, creativity and originality, the ALOA show (as well as several other trade shows) can be more exciting, profitable and memorable than ever.



S E P T E M B E R 1 9 9 6

Letters

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length.

Supra Responds to Keysafe TECHNITIP Printed in July

One of our main goals is to produce a product which offers great value and quality to the Locksmith and their customers.

First of all I commend your reader from Hawaii for finding the movement in the buttons when the "OPEN LATCH" is pressed back and forth. We at Supra had also found this action to be present in our first production parts and have already proceeded with a change to eliminate this movement.

Supra Products have always been made of highest quality materials and have been manufactured with pride in the U.S. This movement did not meet our standards which is why the change has already been designed and is under implementation. If we would have been contacted about this issue before publishing we would have asked you to mount the product

before picking, in this orientation the movement virtually disappears or changes to other random buttons.

*Larry H. Springgate,
National Accounts Manager
Supra*

American Lock & Supply Replies

Ms. Bucha's article "Let's Talk About Licensing" in the June 1996 issue (Volume 67, No. 6) does an excellent job pointing out the various reasons why we as an industry should not support licensing. Unfortunately, the article misses the larger issue: licensing is being pushed by the alarm industry on a state-by-state basis with or without the locksmith's support. So, the real issue is not whether licensing will occur on a state-by-state basis (it certainly will), but whether the locksmith industry should influence legislation so that locksmiths are not left at a competitive disadvantage! It is far better to be part of the legislative process so laws are written which are favorable to our trade rather than have the alarm industry pass licensing which precludes locksmiths from performing a vast array of services.

When one looks at licensing not as an effort to solve "problems" in the industry but as one group (the alarm industry) attempts to put other trades at a disadvantage, the decision by locksmiths as an industry is quite clear. Locksmiths need to be part of the licensing process to ensure they are given an equal footing compared to the alarm industry. It is not an issue of being expensive, decisive, popular, unenforceable, etc. These are all good points. The real issue is



survival! The alarm industry is using the legal system to control a vital and growing market for locksmiths: electronic security and access control products. State by state the alarm industry is passing regulatory measures that effectively diminish and, in some cases, eliminate competition from other trades. Generally, locksmiths are the most adversely affected by this legislation. In some instances, locksmiths are legally not permitted to install door locks without the proper contractors permit!

I personally do not like the idea of having our industry develop regulations and other legal requirement. However, when such legal means are used as a strategic weapon by one group against others it is time to act and become part of the process. It is clear that more and more states will be adopting legislation regarding the installation of security and security related items. Locksmiths, distributors, and manufacturers need to pull their resources together at the state level

The National Locksmith
1533 Burgundy Parkway
Streamwood, IL 60107
Attn: Editor

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so that such legislation is fair to all trades and does not give one group an unfair advantage over the others.

*Sean DeForrest, Chief Executive
Officer/President
American Lock & Supply*

Editor's Note: There are opinions on both sides of this issue. however, I myself strongly agree with Mr. DeForrest's position in this matter. Locksmiths, as a rule, don't like to be regulated. However, we must become part of the process before the alarm industry regulates us out of business. Face it: we already are being regulated. Now it is time for us to have a say in regulations. The time for locksmith licensing is now! Marc Goldberg

Mangomania

I was shocked and appalled by the personal letter from Greg Mango's wife that was printed in the letter column of this magazine last month. The part that I refer to is his nickname of "BEAR." This is an outrage, that's my nickname! I had that name from 1959 to present, and it refers to my wrestling prowess (I am a former champion and have the medals to prove it).

The name started to be in popular use when the two wrestlers were introduced at the beginning of the match. Since I cannot see without my glasses, I had a tendency to squint to see my opponent. My squint as a heavyweight was somewhat frightening to the other team. Once a coach thought I was growling at my opponent (his man) and he shouted at me not to growl.

Immediately, I growled at the kid and stared at him. The referee rebuked me, I stated that there was NOTHING in the rules about growling. My teammate, the wrestler in the 180 pound class shouted, "Kill him BEAR". I played my name from that time on, it helped me gain the prowess that I showed. To let some small person such as Greg Mango no less, be called "BEAR" is an outrage. I challenge Greg to a wrestling match "Here and NOW", and let the winner here-to-for-after be called BEAR. There is not room enough for two "Bears" to work on *The National Locksmith*.

*Dale Libby
Illinois*

Editors Note: No mas, No mas. I must concede that Mr. Libby would probably mangle and maim my fragile little body within the confines of a wrestling arena in no time. As difficult and humbling as this is for me to say, I proclaim "No mas."

Oh, by the way Dale, I've been meaning to call you, I needed to speak to you about future articles you were HOPING to get published. It won't take very long. I promise. Greg "Bear" Mango, Managing Editor.

Enforcement Payroll

I have just one comment. It's about time someone spoke up like Dee Bucha has. I work for the government and I will tell you first hand everything said is correct. The way to attack this problem is not to spend our time and money trying to keep licensing under control or trying to get there first. Do it to stop this mess. The land of the free is costing us out the wazoo already. The idea of enforcement payroll is but a small fraction of the total cost that will go on forever. There is no simple way to start, but this is a beginning. Let us look for other ways to block these upstarts from our craft. Are we too small of a trade to be accounted for? I think not.

*D. Turner
E-Mail*

First Amendment Rights'

I am a regular patron of the public library system. In the 25 years that I have been in this trade, I have looked in the reference section of the libraries I visit and found text books on locksmithing and picking in every one. Free for the asking.

I have in my possession a rather large document titled "The MIT guide to Picking Locks" by Ted the Tool. It is actually a well researched and written tutorial on the operation of different types of locks and how to pick them. His terminology is not our industry standards, but his diagrams are excellent in describing the physics involved in locking systems. It was probably a paper written for a grade in class. Someone not in the trade downloaded it from the Internet and gave it to me.

Over the years I have seen ads in Popular Science, Popular Mechanics, and many others for

lock picks, tryout keys, tools and such, usually in the classified section along with cable boxes, phone taps, and spy tools. Things most of us would believe to be illegal to buy and use.

At one time I was shocked and outraged that this sensitive information was available to any would-be thief and the general public. I thought there ought to be a law or something. With age and some life experience however, I have realized that there is a law! The first amendment to the Constitution of the United States.

I would no more want someone to ban postings to the Internet than I would want someone to take one book from the public library and say I cannot read it. That would go against the very foundation this country is built upon. If I asked my legislator to prevent non locksmiths free access to "secret" lock picking information, I would also be giving away my own rights to learn and do anything I want to, i.e. Plumbing, Electrical, Even Nuclear Science isn't secret anymore.

Let's face facts friends, the only ones who think locksmithing has trade secrets, is locksmiths. Every Patent ever filed is open for public inspection.

If picking is of concern, (and it is) it's up to me to sell high security cylinders. If the door frame is weak, it's up to me to install a secure strike, or recommend carpentry work.

Police opening cars, home centers selling locks, hardware stores resetting cylinders, should not be our focus. They have the right to do so. We need to serve the customers we have. Recommend quality products that meet their needs. Provide the best service available, charge fair prices with a reasonable profit, and keep ourselves informed and up to date with the industry.

It is a good idea to keep an eye on the Internet as well. There is a lot of good information for us as well.

*Roger S. Wechter
E-Mail*

Praise For MAG's Install-A-Lock

Seems as though the only letters I've been reading are negative lately, be it licensing, products, etc.

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Thought I would pass along to you and your readers something positive.

About two years ago, I had to repair a door to the snack bar here at our campus. The thieves had pried open the door, mostly destroying the wood where the mortise lock was mounted. I had used MAG industries products before, so I repaired the door with a mortise Install-A-Lock kit. Easy repair, and it covered all the damage.

Last week, there was a fire at the snack bar in the wee hours. The fire

department entered through this door. After talking with the fire department, and surveying the damage done to the door, I must say that this is one product that lives up to its advertising. The fireman told me that it took everything they had to get in. While one crew was breaking windows in the rear to get water on the fire, two men were trying to enter this door using a pry bar and ax. It took them about 6 min. to effect entry. They wanted to know what kind of lock I had put on the door.

Their pry bar had bent the

deadbolt back 90 degrees, before the 18 gauge metal door jamb gave way. The lock case and door were still intact. The only repairs needed to secure the door was replacing the deadbolt, and welding a reinforcing plate on the jamb. The Install-A-Lock was intact and is still in use.

Please pass along my praise to MAG for a fine product.

*Richard Cybrynski
North Carolina*

Quit The Bellyaching

I am tired of hearing about how bad the State laws are and what laws are being passed. None of this could have happened without somebody putting them together and gather to law makers. You can't get the locksmiths to join together and make the correct laws and regulation that are needed. So what happens when you get things that are unreal and unworkable? "You" or "We" must join an association or form one, and pull together. What it is, is things have been made to good the last 20-30 years and people think things are done automatically and spontaneous.

Manufactures and distributors have taken the role of putting on darn good classes at good prices. That includes trade shows as well. We as locksmiths must join together in local, county and state areas to get a new view of the locksmith trade and profession.

One other cry is certification and training, and letters after your name. There are all levels of certification and titles. We should be proud of Belsaw Certification or State Certification by association and even ALOA certification. We also have DR, BA, BS, AA, and AS etc. All signs of level of training. At least you know they should know what they are doing. The medical profession has their teachers, teachers have them, plumbers, computer, mechanics, lawyers, and Realtors have their levels of training.

We should all join the association and get up to date training from the association and factory personnel. Times are changing fast and you must keep ahead of all new products and items and how they are working.

The cut rate hardware stores don't

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sell knowledge and service to any customers. We locksmiths shops and mobile units can do that. There is still a bright future for all in the locksmithing world. There are lots of new areas as far as electronics and security goes. There are special fields that are wide open to anyone who would work them. There will always be Locksmiths.

*John W. "Smokey" Thompson CCL,
CPL, AS
California*

Business Cards — A Waste Of Time?

The next time you have the opportunity to pass out some of your business cards, but think it might be a waste of time, remember what happened to me.

I was heading home from a job when I saw a police car parked along the road. I asked the officer if they opened locked cars, and he assured me that indeed he did.

"I haven't seen a car yet that I couldn't open with a Slim Jim in five minutes, he replied, but you might as well leave me some cards."

I did and went on my way.

Later that afternoon the phone rang. It was a young man whose car that same policeman and others had worked for half an hour trying to open without success. My set of try-out keys, however, did what the Slim Jims could not.

It seems that this car had just been sold and the young man was taking it to the gas station for some fuel. It was warm so he rolled the windows down. Reaching the gas station he jumped out leaving all the keys in the car and the door open. As he was filling the tank with gas, a playful breeze came along and blew the door shut, where upon the car locked the doors and rolled up the windows automatically. It was well over an hour before I arrived to meet the anxiously waiting customer. The afternoon was certainly frustration for everyone but me. I found it rather profitable.

*E. Carl McHugh
The Lock Doctor*

Pontiac Politics

On 5/19/96 (Sunday morning), I received a call from Pontiac Road Side Service to open a car. Now; one



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technology...
tradition.*

[Click here for more information](#)

month prior, I received a form from them stating its so called rates. I returned their letter with my rates, based on *The National Locksmith* schedule rates. Explaining to them that they did not survey my area or anywhere near it for a fair price rate. They lied! Their normal come-back (canned pitch) is "Well you have to look at the big picture!" My big picture is if I work twice as much, I get paid twice as much or more.

"Well you agreed to our schedule when you sent back the forms!"

My reply was, "A letter and a

revised form was sent to you explaining my rates; not in agreement with your rates."

"Well if you want us to remove you from our computer files we will" exclaimed Pontiac. "Be advised however, that it will also remove you from Chevy Road Side as well as Olds and Buick lists!"

Nice intimidation tactic Pontiac! Cut your nose off to spite your face.

Brad
Ohio

I.T.I. For Now

From reading previous letters from Mr. Peacock and Mr. Bayer in *The National Locksmith*, I see that they were turned down by I.T.I. in their wishes to deal in I.T.I. equipment. I too have a one man shop in a town with a crime rate so low, folks in New York would not believe it. But there are several new shops that have opened up due to the population growth from Californians looking for tax relief. Since the nearest alarm installation company was 65 miles away I thought alarm installation would be a good step.

I.T.I. was kind of cool at first, but when they saw I was serious they were very helpful. I went to the factory school and a sales gig in Las Vegas.

As far as I know, all I.T.I. products are made in the good old U.S.A. You can believe all you want about a global economy, but if we give away all our jobs overseas, sooner or later we will take it in the shorts. So that's one brownie point for them.

Point two is, I have been talking to a small business/computer type store in town over a period of several weeks about installing a system in his store. I.T.I. has, lets say, some premium priced equipment. So the guy was in no hurry to spend what was actually needed to give his store good protection. About the third trip there he pulls out a brochure of another brand name wireless alarm system and asked my opinion. "Where did you hear about this company?" I asked. "Oh, I picked that up at the Handy Helper in Reno" he replied. I am sure happy that I don't sell that other brand. That would be great, spending my time and effort talking up their product and then him going to a Handy Helper and purchasing it there!

There are other manufacturers that I am looking at, but for the meantime, I am concentrating on I.T.I.

Ronal G. Ryder
Nevada

TNL



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SECURITY CAFÉ

Commercial Hardware: Continuous Steel Hinge

Stanley Commercial Hardware has just released a new four-color brochure highlighting their 600 series of Pinned Continuous Steel Hinges. The Continuous Hinge by Stanley is available in both 14 gauge cold-rolled steel and 304 stainless steel in full mortise, full surface, half mortise, half surface and swing clear models. The brochure identifies typical applications in situations where high use and/or high abuse may be anticipated. The 600 series is UL and ULC listed for fire rated 4' x 8' single doors and 8' x 8' pairs up to three hours.



CIRCLE NUMBER
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Features of the hinge, including its slim barrel design, teflon-coated stainless steel pin and twin, self-lubricating nylon bearings at each knuckle, are highlighted. Available in lengths from 7' to 10', the Continuous Hinge can also be field cut for adaptation to special sizes and is particularly well-suited for use as a replacement hinge for damaged doors.

Secrets Of Scrambler Feature Unveiled

Finally, it can be told. For the past 16 years, American Lock Company, a leading manufacturer of high-quality padlocks and accessories, has inserted an "upsetter" mechanism in all of its high-quality, dial combination padlocks, which automatically causes the dial to spin when the lock is closed. American Lock's exclusive "scrambler" feature obscures the last number dialed, thereby providing added security for the customer by

CIRCLE NUMBER
360

first modern dial combination padlock would have such an innovative feature," says Phil Settecase, Vice President of Sales and marketing at American Lock. "The scrambler is just one of the many elements that differentiates our padlocks from the competition. Yet, we continue to sell our product at a cost-competitive price."

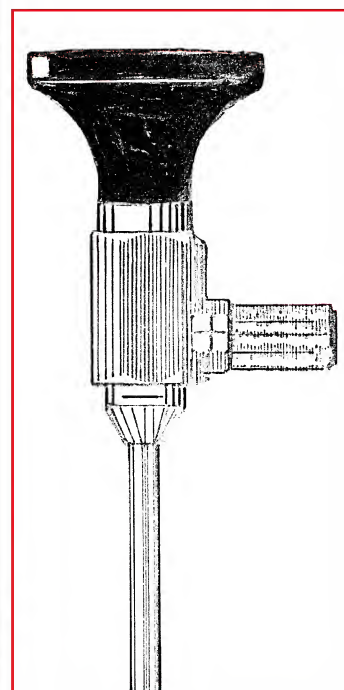
SECO-LARMS's New SK-983A

The ideal access control keypad for many security applications. This self-contained keypad has a built-in 5A relay for electric door strike and other security and

with over 100 million possible combinations for master, user duress, and quick codes. The built-in 5A relay is programmable for shunt ON/OFF or for momentary operation from 1 to 999 seconds. Other security features include duress output, a built-in tamper switch, and EEPROM memory to store the keypad's programmed data in case of power failure.

Medical Grade Borescopes by R.Q. Associates

CIRCLE NUMBER
362



Security
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not allowing the last number dialed to be exposed. "It's not surprising that the company that created the

access control applications. Security is assured

CIRCLE NUMBER
361

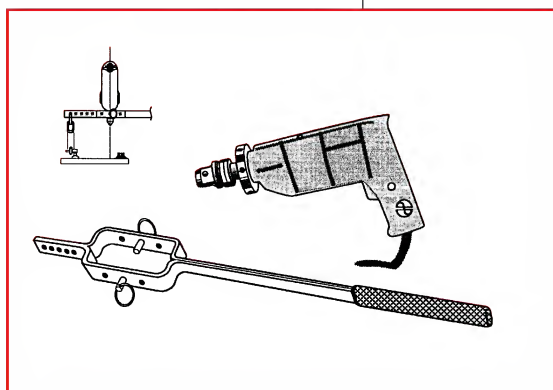


R.Q. Associates has German-made medical grade borescopes available at prices nearly half of what they are in the medical field. The 4mm x 11-7/8 inch borescope has a fixed focus, 30 degree angle of view/80 degree field of view medical rod lens with 10 power magnification and ACMI light guide connection. The unit allows a safeman to view straight ahead from 0 to 30 degrees and have an 80 degree field of view, which allows for viewing through a front or top drill point.

SECURITY CAFE

Continued from page 18

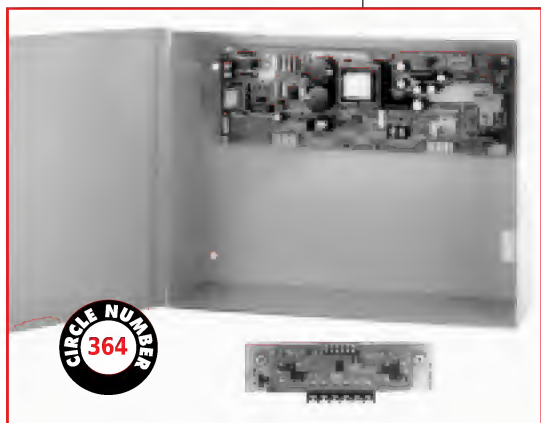
Keedex's Safe Drill Rig



Keedex Manufacturing now has an optional collar, that is compatible with many of the Milwaukee® brand drill motors, available for the K-14 Safebuster drill rig. The standard K-14 collar is designed for drills, such as the Bosch, with a diameter of 1.69" to 1.72". The optional collar works with Milwaukee® drills, that have a diameter of approximately 1.80". This optional collar can be substituted at no additional charge. The K-14 Safebuster is one of the most affordably priced safe drill rigs.

Von Duprin Power Supply

JLM Wholesale is now stocking a new power supply from Von Duprin. The Von Duprin Series PS 873 Power Supply is designed to operate a variety of electrical products, including EL exit



devices, and has field-selectable regulated output for either 24VDC @ 2 amperes or 12 VDC at 4 amperes. It can be ordered with three standard options: Key Lock, Battery Backup, and Fire Alarm. The PS 873 is a 10" high x 12 - 1/2" wide x 5" deep 19-gauge steel enclosure

which offers several optional plug-in circuit cards for excellent system flexibility. The power supply will accept one or a combination of any two cards, including two-zone controller, alarm function, auto operator, security interlock, two-zone controller with time delay and fire alarm, and two zone controller with time delay. Additional factory installed circuit cards are available for access control and delayed egress functions.

Lubricant Specially Formulated For Locks And Safes



After more than two years of research and development, Coast Safe & Co., Inc. of Mobile, Alabama now introduces a lubricant made especially for the locksmith and safe technician. Not only will the #CSL-1001 lube leave a long-lasting film of lubricant greatly reducing friction and wear, but it also is a great cleaner by cutting through soil, grease and grime. It also



penetrates and stops rust by "wicking" though and coating metal with a moisture barrier. It is also non-conductive so it can be used to correct moisture induce electrical short circuits in switches, relays and ignition systems. This is a synthetic based lubricant so it will not attract dust or become tacky like most petroleum based lubricants on the market. Besides the fact that this is an excellent lubricant for locks, cylinders, latches, hinges, safes, bolts, handles and cams, it is also great on guns, rods and reels too!

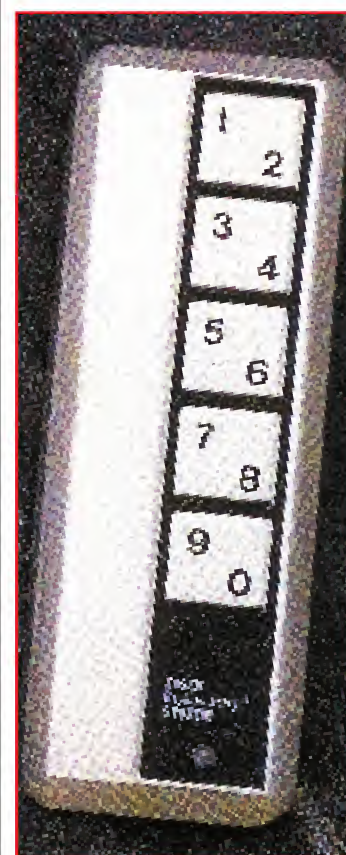
Dewalt's Carbide- Tipped Percussion Masonry Bits



Improved carbide tip provides up to 2X longer life. Innovative tip configuration reduces walking for improved

accuracy. Unique flute design efficiently removes dust, reducing bit binding. Optimum grade of carbide maximizes durability. Available in 4", 6" and 12" lengths, with a range of 1/8" to 1" diameters.

Essex Electronics Product Release



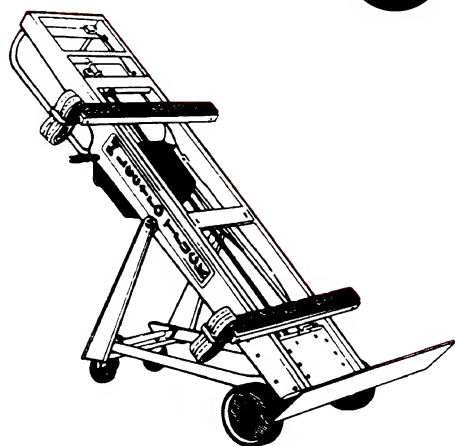
"Eight years after its introduction, the Model KE-250 Keyless Entry® System from Essex Electronics will see a minor make-over by November of 1996. Changes will include replacement of the internal transformer with an external A/C adapter, allowing customers to achieve some cost savings by using their own transformer if they desire. The Model KE-250 is a single door Access Control System. It is ideal for simple applications, sending a 12 VDC output to a fail-secure electric strike.

Continued on page 22

SECURITY CAFÉ

Continued from page 20

Lectro Truck: 3-In-1 "Total Moving System"



Looking for a better, safer, and less costly way to move heavy safes to another site, up and down stairs or load and unload them from your vehicle? Lockmasters is proud to bring you the latest in save moving and latest addition

to our product line - the New Lectro-Truck-3-In-1 "Total Moving System."

Lectro-Truck's unique design enables a single technician to easily balance and control large loads; to lift and lower objects to and from vehicles; and to "walk" heavy loads up flights of stairs, safely and quickly. Lectro-

Truck not only reduces labor costs, but reduces the chance of injury and lessens damage to product and property. Operated safely by a push button, the Lectro-Truck allows one technician to comfortably handle a safe weighing up to 1,500 lbs.

Aluminum Underbed Box



The NEW Weather Guard aluminum underbed boxes have been designed to be both lightweight and durable. Tools and equipment will remain dry and safe inside a storage box made of heavy .100 thick diamond plate aluminum which has had all seams fully arc welded for exceptional strength. Features include a rotary style two position "safety" catch latch system which keeps the door from accidentally opening in transit. The door also features a welded reinforcing channel which increases rigidity and assures a weather tight seal. Aircraft type cable with swaged fittings support the door when open or they can be disconnected to allow the door to open into a full drop down position.

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Jensen Introduces Multi- Purpose Tool Line



A tool kit you can tuck into your pocket? The Paratool is the "kit" for you-

a single tool with 20 different features! It's the top-of-the-line SOG® multi-purpose tool now being offered in the Jensen Tools Master Catalog. It's one of the most comprehensive multi-purpose tools you could find, with a needlenose

pliers, wire-cutter, file, awl, straight point knife blade, serrated blade, measuring scale, and more (even a can/bottle opener). The Paratool is just 6" long open and 4" closed. If the Paratool sounds like more than you need, how about the Toolclip with 14



features? It has grippers, pliers, wire-cutter, wire strippers, screwdrivers, file, serrated blade, and a few other things (including a light duty pry bar). Only 5-1/4" long and 1-1/4" wide. Still too much for your needs? Micro Toolclip is just 3-3/4" long by 1" wide and its 7 features give you lots of work capabilities-wire-cutting pliers, pry bar, serrated and straight knife blades, wire stripper, file and screwdriver. **TNL**

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GENERAL SECURITY
Test Article #133

Adams Rite Meets ADA

by **Jake Jakubowski**

Adams Rite has offered a push paddle and lever handle for its dead latching locks for a long time. Now a lever handle is available for its deadbolt as well!

My granddaddy was fond of quoting Will Rogers. One of his favorites was: "Rumor travels faster, but it don't stay put as long as Truth." Having learned to heed my granddaddy's words, I never put much stock in rumors. Consequently, when I began hearing that the folks at Adams-Rite was working on a lever handle capable of operating an MS-style deadlock, well, I just didn't pay it no mind. Fact of the matter is, I flat-out forgot about it.

That is, until the big brown truck pulled into my driveway and dropped off a box that had what you see inside it (see Photograph 1). What you are seeing in that photograph is the Adams-Rite 4550 Deadlock Lever! No Fooling! Those Adams-Rite folks went and done it!

They made a genuine honest-to-goodness lever set that will operate the MS series (that's the swing up type deadlock) 1850, 1850A, 1850S, 1880, 1850NSI, 1837. And, friends and neighbors, even such MS-style derivatives like the 1870, 1877HM, and 1877. Flush bolts are also operable by the 4550 Deadlock Lever!

you're out (see Photograph 2). To lock the deadlock, just push up on the lever! That's all there is to it! Just a simple 90 degree movement and your customer's employees or clients can exit the building quickly, easily and safely - even if the door is locked!

Making a good thing even better is the fact that the 4550 also meets ADA requirements regarding accessibility. However, on many retro-fit applications, it may be necessary to reposition the MS lock on the door. The ADA stipulates that "hardware required for accessible door passage shall be mounted no higher than 48in. (1220mm) above finished floor." (Part III, Section 4.13.9 "Door Hardware.") That simply means that on some retro-fits, you may be

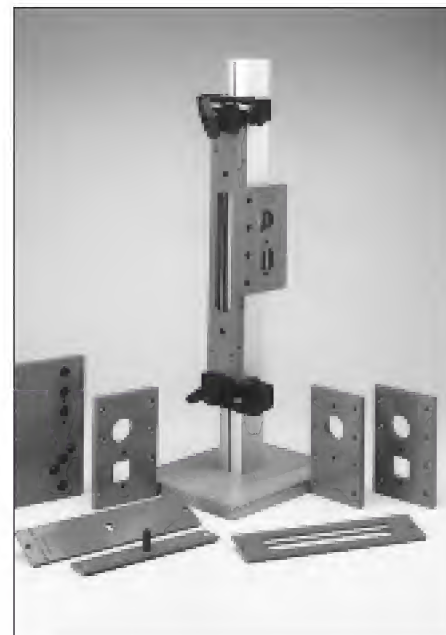


1. The Adams Rite 4550 M/S Lever Set.



2. A simple 90 degree downward motion and the M/S lock is released.

What all this means to you is, as locksmiths, you now have a product that will give your customers the secure feeling that comes from having a deadlock on a narrow-stile glass door and will still comply with Life Safety Codes (NFPA-101) for "one-motion egress" and the "no-special knowledge" mandates of those codes. To unlock the MS Deadlock from the inside, just push down on the lever handle and



3. Major Manufacturing's HIT 45Clamp and HIT - 45AR2 & 3 make installation a cinch.



4. Even placing a 12" long latch guard by MAG Engineering (model 8854-AL,) will not interfere with the operation of the A/R 4550.

required to lower the location of the lock from above the push-bar to below the push-bar.

That's easy enough to do, especially if you use Major Manufacturing's HIT-45Clamp and HIT-45AR2 or 3 as seen in Photograph 3. This tool is another of Major's HIT series of lock installation tools that have made many a locksmiths job easier and is



5. The 4550 attaches to any narrow stile M/S lock with four #8 screws. A relatively simple installation.

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6. Arrow 1, points to a unique A/R cam that allows the leverset to work with an M/S style lock. Arrow 2, indicates the pin that operates the indicator.

available from your favorite distributor. The HIT-45 can also be used for installing other mortise locks like Schlage, Arrow, Flacon, etc. However, that's for another article. Let's get back to the 4550.

First off, you need to know that in any application, the 4550 does not interfere with the normal

outside key operation of the Adams-Rite deadlock on which the 4550 is used. If you want to use a latchguard on the outside of the door like MAG Engineering's 8854, you can do so without affecting the operation of the Adams-Rite 4550 Deadlock Lever (see Photograph 4).

Now, after we get into the nitty-gritty of the 4550, you need some statistical-type information on it. The housing for the 4550 is cast aluminum and measures 1-3/8" wide, 7-1/2" and 1" deep. It is attached to the door by four #10 screws (see Photograph 5). The lever is also cast aluminum and is 4" long with an end return (that's a bend in the end of the lever to make it look nice an' keep your hand from slipping' off) that offers a comfortable grip to allow easy locking or unlocking of the MS deadlock. The 4550 has a "Locked"/"Unlocked" indicator that readily shows the status of the deadlock. The word "Locked" appears in red letters and the word "Unlocked" appears in black lettering. The standard 4550 package comes with installation instructions, mounting screws and drive pins for both single-point and threshold bolt equipped locks. All you have to do is drill and tap the appropriate holes, install the special cam and the job's complete.

Photograph 6, shows the cam, which screws into the lockcase. Screwing this cam into the lockcase can get a little trying at times, but Adams-Rite even made a tool



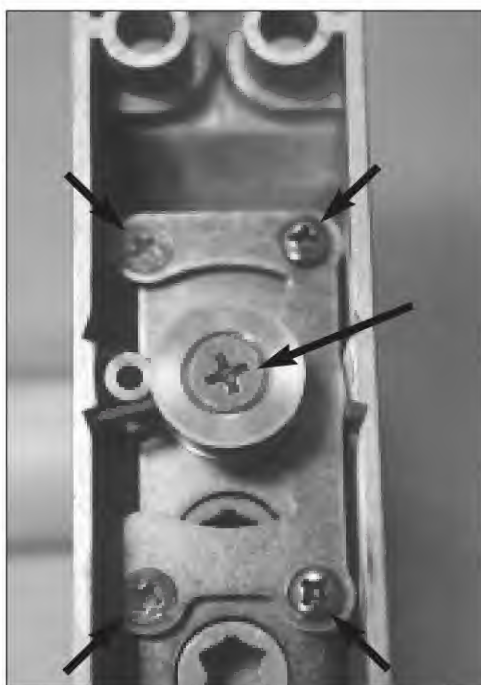
8. After removing the four screws that hold the "C" shaped plate in place, remove plate, turn it end-for-end and rotate 180 degrees.

(Adams-Rite # 22-06770 Installation Tool) that makes the installation of the cam easier. And believe me, using the tool is easier than trying to install the cam without it. If you look closely at photograph six, you can see that a simple slide (see arrow) is all it takes to operate the built-in exit indicator which gives you a quick, visual status of the door's condition.

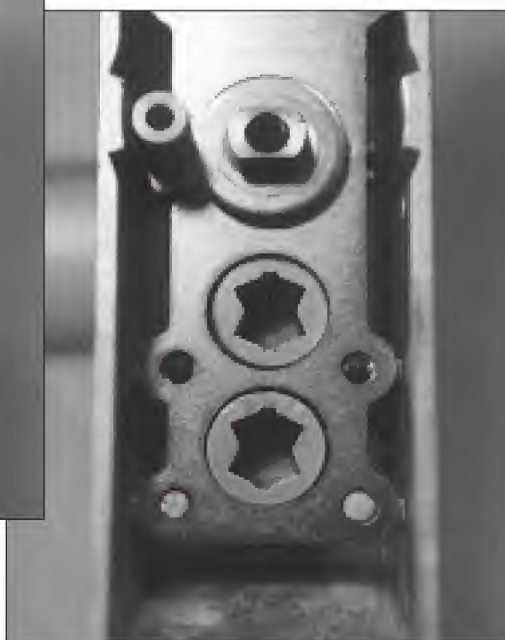
The 4550 comes handed, but is easily changed in the field. In Photograph 7, the number one arrow points to the spindle and spring that have to be removed first. After removing this, just set it aside. Next remove the four screws shown in photograph seven, and gently remove the plate those screws secure. Now, as shown in Photograph 8, rotate the lever 180-degrees, flip the plate and re-install it as shown. All you need to do now is re-install the spindle and spring, with the spring stop post facing the same way as the lever (see arrow) and tighten the retaining screw.

Those few simple steps illustrate how easily the hand of the 4550 lever can be changed. The only thing you need to be careful of is dropping parts or screws, so I

Continued on page 28

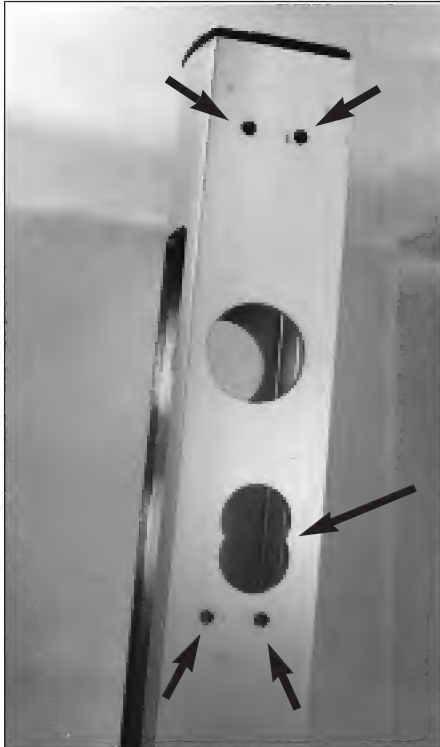


7. Arrow indicates the screw to remove when removing the spindle and spring to change the hand of the leverset.



Continued from page 26

suggest that you do the work on a work bench or a good flat surface. And no, I'm not going to tell you



9. What the stile would look like prepped to receive an M/S lock and the Adams Rite 4550.

how I figured that out except to say that the quickest way to find a screw that you dropped on the floor is to kneel on it!

There is no special trick at all to installing the 4550, especially on a retro-fit where you don't have to move the location of the lock. All you need to do is put the template in position, mark the cut-out for the indicator and the holes for the #10 screws. Cut, drill and tap the stile as needed, install the special cam and put the 4550 on the door. Then, just check the operation of the lock and your done!

Even if you have to reposition the lock, there's no sweat involved (especially if you have Major's HIT-45 handy). Once you have the new cut-outs made, just follow the easy steps shown in the following photographs for a trouble-free, quick installation. Remember two things: The first time's always the scariest. And remember, when you do a cut-out for an M/S style lock on an aluminum, narrow-stile door, it is not a \$20.00 job!

Photograph 9, shows an aluminum stile with a standard M/S

prep, with the exception of the indicator hole (see arrow #1) and the four holes that have been



10. An Adams Rite 1850 M/S deadbolt in place.



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drilled and tapped for the #10 screws that hold the lever to the stile.

Photograph 10, was taken with the MS Deadlock in place and *Photograph 11*, shows the specially patented Adams-Rite Cam that makes the 4550 work.

Now, I'm going to tell you as straight as I can. The 4550 is a brand-spanking new product from Adams-Rite and I wrote this article based on the prototype that they sent to me to play around with and tell them what I thought about it. By the time you read this, the 4550 will have been in full production and should be at your favorite supplier. It will be in my inventory and I intend to be gathering some shekels from it's sale and installation. I'd recommend you do the same thing. There's no doubt in this ol' boy's mind, that this new

lever set from Adams-Rite is going to be a mighty popular seller.

And based on my previous experience with Adams-Rite products, I know for near certain that when I install one of these levers, it's going to be giving a lot of trouble-free service to my customers. I

know that's just this ol' boy's opinion, but it's not a fast traveling rumor when I tell you that the 4550 will do the job it's designed to do for a long time to come. And that's the Truth! **TRL**



11. On the left is the cam viewed as if it were in the M/S lock. On the right is the cam as if it were seen from the outside of the door. The spring loaded cams are what make this lever set workable.



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AUTOMOTIVE SECURITY
Test Article #134



by
Michael Hyde

Servicing The 1996 Dodge Stratus!

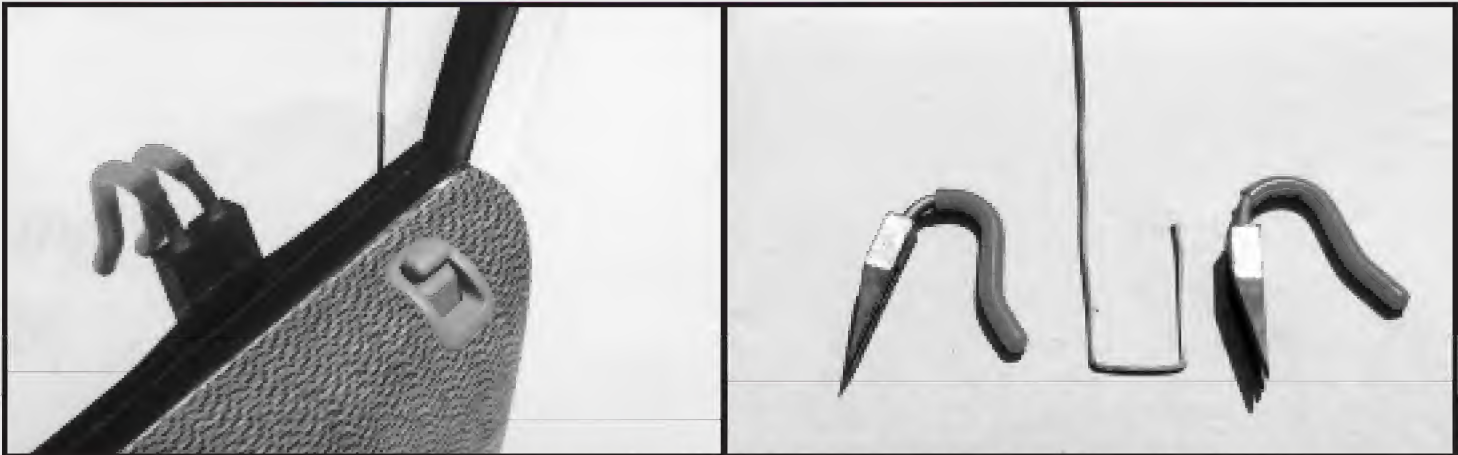


1. The 1996 Dodge Stratus.

This month we take a look at the 1996 Dodge Stratus.

In this issue we will cover the ignition lock.

The Stratus uses the standard Chrysler keyway and tumblers found on almost all the late model Chrysler products.



2. Use wedges and an under the button tool to open the vehicle.

OPENING:

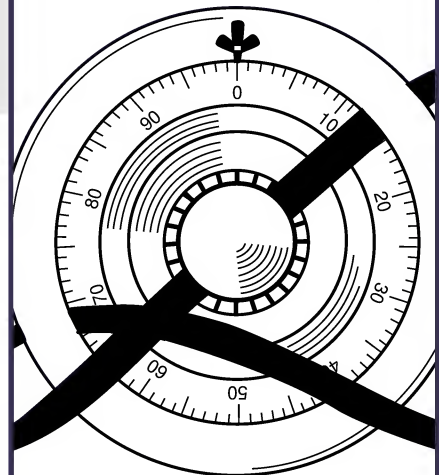
This car is equipped with vertical linkage. To open the car use an "under the button tool" or a slide linkage tool to bind the rod and move it upward to unlock the car. It would help to use a couple of wedges (see Photograph 2).



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3. Note the shroud around the ignition.



4. Unsnap the cover.

IGNITION:

To service/ remove the ignition lock, it is not as simple as it looks. The ignition lock is encased in a standard two-piece plastic shroud, also referred to as the "clam-shell" (see Photograph 3).

To remove the ignition lock, it will be necessary to remove the side access fuse panel, the heating and radio control trim bracket, the large plastic dash trim

piece that fits over the dash, the drivers side kneebolster (lower section of dash, below column), and the steering column two-piece plastic shroud.

I will guide you through this process that sounds harder than it really is.

The first step is to remove the side access fuse panel. That is done by unsnapping the cover. (see Photograph 4).

Once you remove the panel, remove the phillips-head screw as seen in Photograph 5.

Next, remove the heating and radio control trim bracket. The bracket unsnaps from the dash (see Photograph 6).

Now that you have the trim bracket removed it will be necessary to remove the four phillips-head screws that hold part of the large plastic dash trim (see Photograph 7).

The next step is to unsnap the large plastic dash



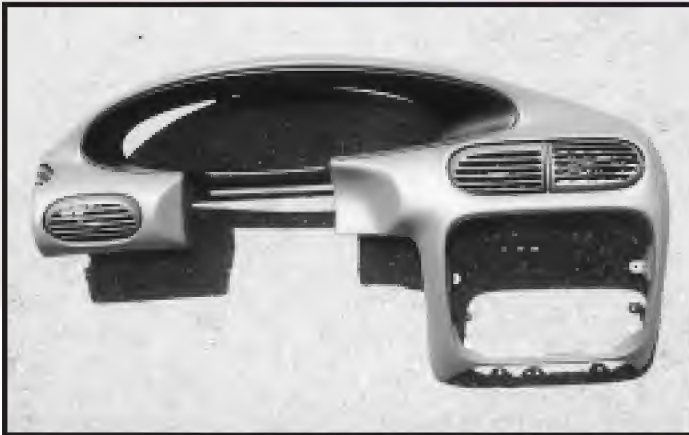
5. Remove the phillips head screw.



6. Unsnap the bracket from the dash.



7. Remove the four phillips head screws.



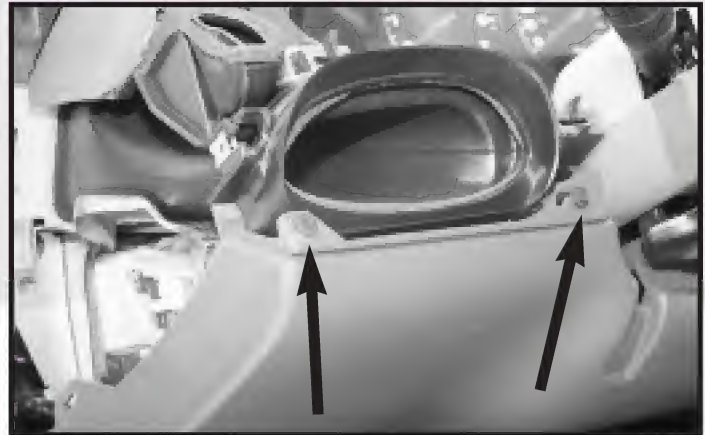
8. Unsnap the large plastic dash trim.

trim piece. To do this, grasp the top part of it in the back edge near the windshield, that is above the instrument panel and gently pull outward with steady but careful pressure. You should feel the snaps as they unsnap one after another (see Photograph 8).

Next, remove the two phillips head screws on the left upper section of the knee-bolster (see Photograph 9).

Now remove the one phillips-head screw on the right side of the knee bolster (see Photograph 10).

Remove the last two phillips-head screws on the



9. Remove yet two more screws.

lower section of the knee-bolster. The knee-bolster is pictured (see Photograph 11).

Finally, you can now remove the three column shroud trim piece screws. The phillips-head screw hidden by the knee-bolster is pictured by the placement of our screwdriver (see Photograph 12).

The ignition cylinder has an illuminated trim ring that sits on the front of the lock cylinder. You must unsnap it and push it out of the way (see Photograph 13).

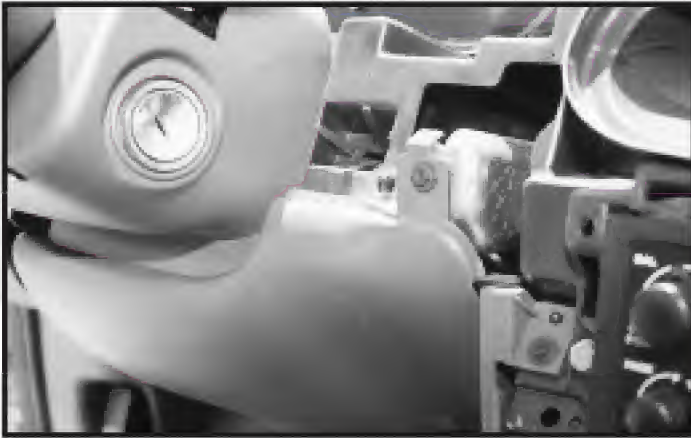
Insert the working key and rotate the lock

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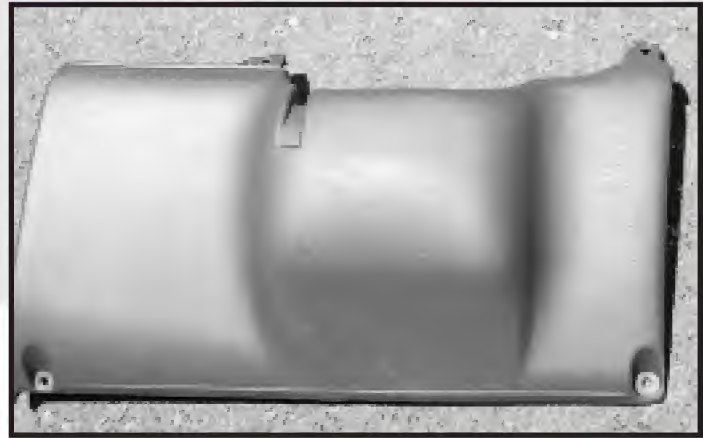
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10. Close-up of the knee bolster.



11. The lower screw holes on the bolster.



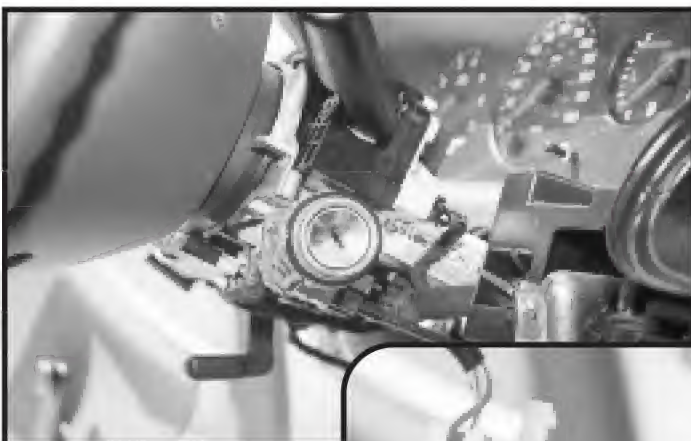
12. Now you can reach the three shroud screws.

clockwise to the "ON" position and then insert a probe to depress the active retainer to release the ignition cylinder (see Photograph 14).

The ignition cylinder is now removed from the column (see Photograph 15).

To disassemble the cylinder you must insert the working key and rotate the cylinder counter-clockwise to the accessory position. Depressing the detent roll pin will allow you rotate the cylinder farther and then you can slide the plug out (see Photograph 16).

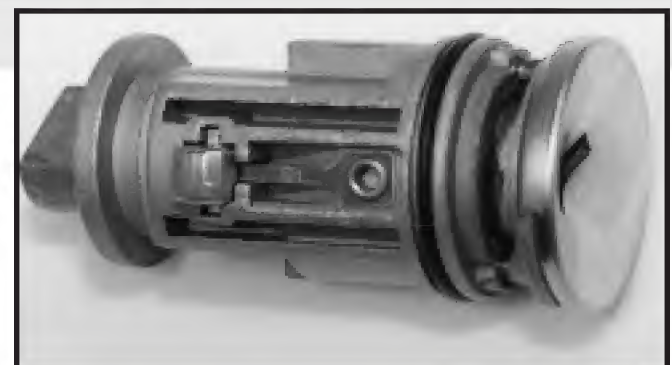
The ignition plug contains all seven tumblers. The ignition plug also has a small detent activator, that is not pictured, this activator must be in the plug when you re-assemble the lock. The car will not start without the activator (see Photograph 17).



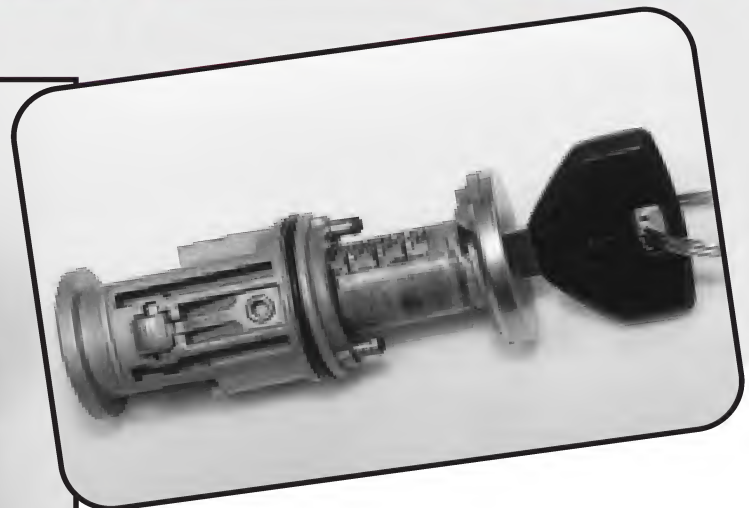
13. Unsnap the trim ring and move it aside.



14. Probe for the retainer.

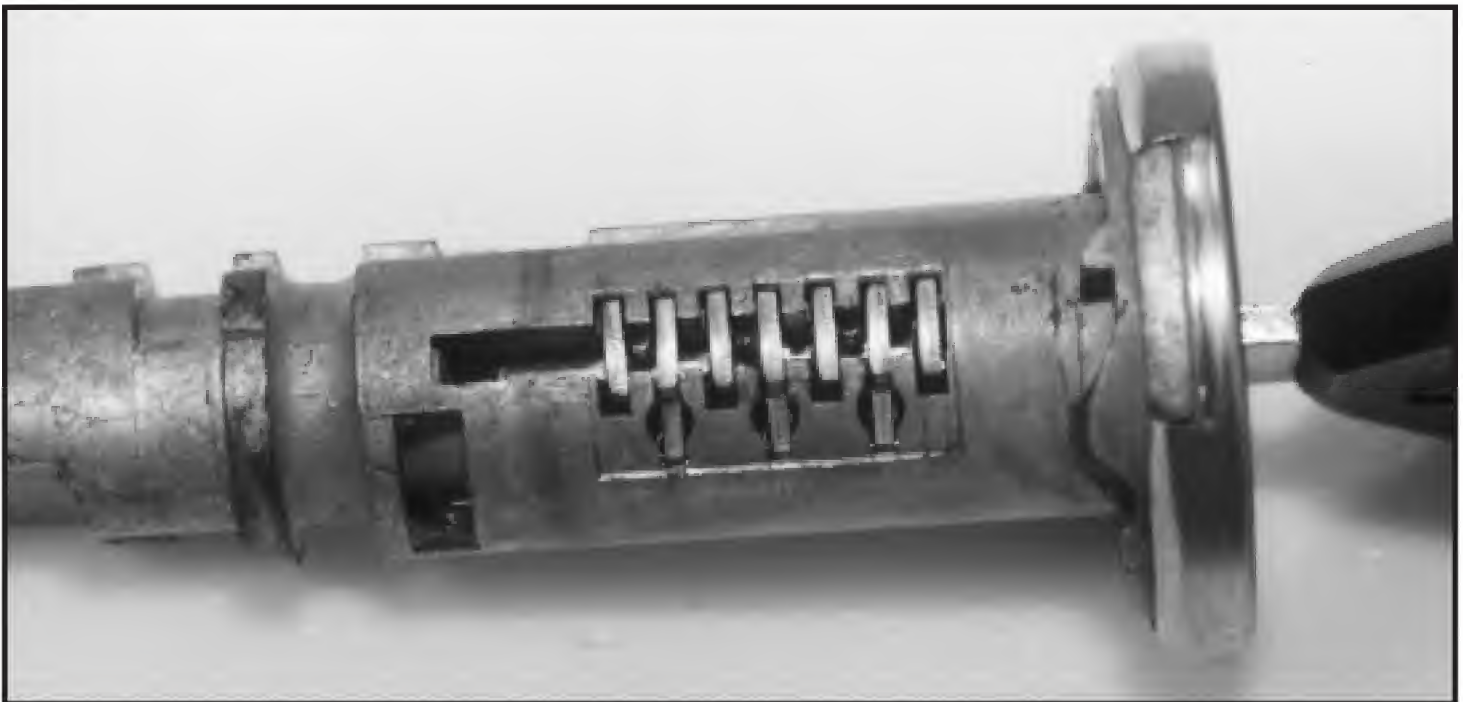


15. Pull the ignition cylinder out.



16. Depress the detent roll pin.

Next month, more Dodge Stratus.
We will cover the door lock, trunk lock, rear seat
lock and glove box lock. Don't miss it!!



17. The ignition plug contains all seven tumblers.

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ELECTRONIC SECURITY
Test Article #135

Ground VERSUS Ground!

by **Robert Bell**

Throughout the nation, lightning and the potential damage it can inflict on electronic devices has become an increasing problem. Some believe that there has always been the same amount of lightning present, but its not been a problem until this modern age of electronics has blessed us with so many gadgets. The more items affected by electrical surges or T-lightning (Transient lightning) will of course get more notice by the person who is using them.

This article is to help make you aware of problems that affects you doing alarm work, as well as show a potential for further sales in Surge and Lightning protection.

All modern alarm panels need to be grounded as specified in the installation manual. Some are more specific than others, and some have more protection. A Scantronics panel has a discharge tube built-in to handle lightning strikes. It does work as I have had the unpleasant experience of

lightening strike hits, but not the damage that is normally associated with it since I use mostly Scantronics panels. The question is, how did the lightning get to the panel?

This article is to advise you how lightning gets in and ways to prevent it.

Ground is important, but the type of grounding is even more so! An electrical ground is the one used mostly by cable TV companies, phone companies, and of course the electric company. Each service tries to use the ground of the other, and they are all assuming that the first one (usually the electrical ground) is the best. Everyone on the piggyback chain is thinking that the electrician has been the one to provide not only electrical ground (life hazard, needed to make sure circuit breakers trip, and the GFI service works) but an earth ground as well. The electrician usually ties that which is to go to earth ground to a cold water pipe. But if the cold water pipe is plastic, as most modern

construction is, the earth ground goes nowhere. This leaves the only ground back as the electrical one provided on the neutral/return leg for the electrical service.

The electrical inspector should catch this one, But did he?

This is why its important that you protect yourself and your customer with the following items, surge/lightning protection with Earth ground for your alarm panel. You must use a 10 gauge copper wire keeping it clear from all other electrical runs as far as possible, and in a straight line with the least amount of twists or bends. Your wire should run the shortest distance possible outside to a grounding rod. Now being a professional you don't want to use cheap stuff, no 4' galvanized rod from that friendly electronics store on the corner.

You want an 8' copper U.L. approved rod, held on by either copper or brass clamps. And you want as much of that 8' into the ground as

Continued from page 36

possible. You can cut off extra length but not more than 2' (and try not to let more than 8" stick out of the ground). Another thing to remember is to do it in a spot where people won't trip over it! Keeping it the same metal is an assurance that the connections will stay free of oxidation. You also want to

spray it with a product called Perm-a-seal which creates a moisture proof barrier around the connections (don't use it inside your panel! Only on outside connections or in damp basements).

I have seen where cable TV installers used a customer's water faucet outside the house for a grounding point and the steel clamp had a corroded piece of aluminum wire attached to its rusting body. This was not a ground and wouldn't help protect against any kind of electrical problem.

Now that you're sure your panel is Earth grounded properly, what else is there to worry about? Well, there are at least two more areas to be careful of, and make some money on when it

comes to surge and lightning problems - the phone line into your panel, and the 120v power supply your systems transformer is plugged into. Most panels run on a stepped down voltage of 13.8 to 18 volts. If your house was hit with a voltage surge, a transformer will step down the surge just as it would a regular voltage, but this can hurt your panel (not to mention all the appliances in the house). A surge protector is needed where the service outlet is for your system. I use a brand called DITEK which covers almost every area of surge and lightning protection that could be a problem. The surge protector doesn't allow anything over the prescribed voltage to get past it. When it is hit by a higher voltage it sends it to ground, thereby protecting the item it's connected to. A surge protector on the 120v supply for the transformer is highly recommended.

The telephone line is the next item. Most experienced alarm men know what an RJ31X is and how it's connected to your alarm system, if you don't I'll give a brief refresher.

The RJ31X is usually set up near the panel or where the Telco comes

into the residence. It allows your customer to unplug it to prove that the alarm panel isn't causing a problem on the phone line (most states require it on an alarm system installation). DITEK has an RJ31X protector that is a plug in unit, with a male and female connector. This allows an easy plug in set up. However, there is a ground lead off the DITEK unit that must then be run to (Earth) ground. You can connect this to your Earth ground for your alarm panel but are you being professional? The N.E.C. recommends that you have separate grounding rods for a separate service, and that they all be at least 6' away from each other!

So if you want to be professional you should do it the right way. Advising the customer why the extra cost may get you a thanks instead of a groan. You can do it the easy way, and less expensive way, but make sure you get your customer involved, after all he was smart enough to hire you to do the job in the first place. Plus the added fact that he wanted security for his home which would note that he is interested in its proper protection.

So what have we accomplished so far? By putting proper ground (earth

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ground) on your alarm panel, telephone line to the panel, and the electrical service, you have given protection from electrical surges hurting your equipment. By showing the customer that you are aware of these problem, will make you look more professional in his eyes.

There are a number of other areas in a persons home that may be a candidate for surge and lightning protection also. There are surge and lightning protection products that will cover appliance, computers and the modem connected to the phone line as well as phone systems, answering machines, FAX machines, cable TV boxes, etc. The list goes on, and so does your possibility of selling these protective devices.

My next area of protection is when you do the wire runs through a customers house. I know its a big enough headache and many of use try to get away with wireless, but there are some areas that you just can't! Usually your customer wants and exterior siren and or red/ blue/ yellow

strobe light. You have to run a wire! Wires are like antennas, the more you have the better your chance of attracting a signal or lightning! Usually transient lightning is the one that gets into most homes, and if

you've understood what I have said so far, you should have nipped most of it in the bud. However, (isn't there always a "However?") lightning likes to travel. It may have struck a persons house on the far side from where you have grounded. It can come in through the sprinkler system, the hose for the outside faucet, outdoor lights, the garage. etc.

Your alarm's wiring may be near by, and it can jump into it at that point. What will happen? Anything on that loop is subject to damage, and since that loop heads back to your panel its next in line. A trick to remember is to circle your runs outside the panel before cutting out all the slack. Lightning likes to travel the path of least resistance, making a loop of the wire outside the panel may be just enough to have it jump to the panels ground instead of into the box (your proper grounding of the panel should prevent damage to it) but the lightning may head back out on another alarm loop again! Make sure your loop isn't too tight or too big since that will defeat the purpose of doing it (about a 4" coil is proper). And not to many coils or you will be creating an induction coil which may cause other problems.

There is no sure way of preventing lightning strikes, only precautions measures that can be taken. I would suggest that in your service agreement, you make a note that direct lightning strikes are not covered. It's impossible to guarantee.

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GENERAL SECURITY TEST

COVERS TEST ARTICLES...

#127 July 1996

"'Flexcore' Arrow's New Best-style IC Lock"

#130 August 1996

"Medeco Interchangeable Core Locks"

#133 September 1996

"Adams Rite Meets ADA"

1. A unique feature of the Arrow Flexcore IC lock is?

- ☐ A. A cam pin and washer
- ☐ B. The locking lug
- ☐ C. Number of pins
- ☐ D. Bitting requirements

2. The Arrow Flexcore is convertible by the removal or installation of the key?

- ☐ A. True
- ☐ B. False

3. The cam pin extends from the back of the core to?

- ☐ A. The center
- ☐ B. The front
- ☐ C. The last pin chamber
- ☐ D. The third pin chamber

4. The Arrow Flexcore will be introduced with how many keyways?

- ☐ A. Five
- ☐ B. Six
- ☐ C. Seven
- ☐ D. Eight

5. A hole is drilled into the end of the Arrow Flexcore key?

- ☐ A. True
- ☐ B. False

6. Pinning the Arrow Flexcore is the same as the Best style IC cylinder?

- ☐ A. True
- ☐ B. False

7. Removal of the cam pin and washer assembly on the Flexcore would be required before using an ejector punch?

- ☐ A. True
- ☐ B. False

8. The cam pin in the Flexcore is attached to the back of the lock?

- ☐ A. True
- ☐ B. False

9. The cam and pin in the Flexcore are one part?

- ☐ A. True
- ☐ B. False

10. The Arrow Flexcore is available in either a five or six pin version?

- ☐ A. True
- ☐ B. False

11. The Adams Rite 4550 is a deadlock lever?

- ☐ A. True
- ☐ B. False

12. The Adams Rite 4550 does not comply with Life Safety Codes?

- ☐ A. True
- ☐ B. False

13. The Adams Rite 4550 should not be installed any higher than?

- ☐ A. 36 inches
- ☐ B. 40 inches
- ☐ C. 44 inches
- ☐ D. 48 inches

14. The housing for the Adams Rite 4550 is cast aluminum?

- ☐ A. True
- ☐ B. False

15. The word "Locked" and "Unlocked" appears in red letters on the Adams Rite 4550?

- ☐ A. True
- ☐ B. False

16. The Adams Rite 4550 comes handed and cannot be changed?

- ☐ A. True
- ☐ B. False

17. The Adams Rite 4550 is designed to fit narrow stile M/S lock?

- ☐ A. True
- ☐ B. False

18. To change the handing of the Adams Rite 4550 lock?

- ☐ A. Remove four screws that hold the "C" shaped plate and rotate 90 degrees
- ☐ B. Remove four screws that hold the "C" shaped plate and rotate 120 degrees
- ☐ C. Remove four screws that hold the "C" shaped plate and rotate 160 degrees
- ☐ D. Remove four screws that hold the "C" shaped plate and rotate 180 degrees

19. The 32-series Medeco lock is a standard core lock?

- ☐ A. True
- ☐ B. False

20. The Medeco 32-series locking lug is controlled by two pin chambers?

- ☐ A. True
- ☐ B. False

21. To retract the locking lug on the Medeco 32-series lock, the core rotates clockwise?

- ☐ A. True
- ☐ B. False

22. Only the fourth and fifth pin chambers control the locking lug on the Medeco 32-series lock?

- ☐ A. True
- ☐ B. False

23. Because of the control sleeve design on the Medeco 32-series lock, there will always be a three depth difference between the control key and the operation key in the third and fourth positions?

- ☐ A. True
- ☐ B. False

24. The purpose of a dome face plug is to reduce the likelihood of plug wrenching?

- ☐ A. True
- ☐ B. False

25. The Medeco Biaxial 32-series lock has a .030" pin increment?

- ☐ A. True
- ☐ B. False



AUTOMOTIVE SECURITY TEST

COVERS TEST ARTICLES...

#128 July 1996
1996 Dodge Caravan

#131 August 1996
"Mercedes Benz"

#134 September 1996
"1996 Dodge Stratus"

1. The easiest way to make a key to the 1996 Dodge Caravan is too?

- ☐ A. Pull the door lock.
- ☐ B. Pull the ignition lock.
- ☐ C. Impression a key.
- ☐ D. Use an EEZ-Reader.

2. The EEZ-Reader is designed in how many parts?

- ☐ A. 1
- ☐ B. 2
- ☐ C. 3
- ☐ D. 4

3. M.A.C.S. for the Dodge Caravan is?

- ☐ A. 1
- ☐ B. 2
- ☐ C. 3
- ☐ D. 4

4. The door lock of the Dodge Caravan contains all the tumblers for the entire vehicle.

- ☐ A. True
- ☐ B. False

5. How many tumblers are in the door locks of the Dodge Caravan?

- ☐ A. 5
- ☐ B. 6
- ☐ C. 7
- ☐ D. 8

6. There are how many tumbler depths on the Dodge Caravan?

- ☐ A. 3
- ☐ B. 4
- ☐ C. 5
- ☐ D. 6

7. The ignition lock of the Dodge Caravan contains more tumblers than the door locks.

- ☐ A. True
- ☐ B. False

8. When using the EEZ-Reader the cuts are decoded from?

- ☐ A. Bow to Tip
- ☐ B. Tip to Bow

9. To remove the door panel of a Lexus LS400, you must remove a screw in the heater vent tunnel?

- ☐ A. True
- ☐ B. False

10. To remove the lock from the door handle on the Lexus LS400, you must remove?

- ☐ A. One clip
- ☐ B. Two clips
- ☐ C. A 12mm screw
- ☐ D. A 10mm screw

11. There is a code stamped on the drivers door lock of a Lexus LS400?

- ☐ A. True
- ☐ B. False

12. The tumblers in the door lock of the Lexus LS400, are?

- ☐ A. First four are solid, the next three are split
- ☐ B. All seven are solid
- ☐ C. All seven are split
- ☐ D. First three are solid, the next four are split

13. All Lexus trunk locks can be removed from the back?

- ☐ A. True
- ☐ B. False

14. To remove the trunk lock on the Lexus LS400, you must?

- ☐ A. Remove one screw
- ☐ B. Remove two 10mm bolts
- ☐ C. Remove one 12mm bolt
- ☐ D. Remove a clip

15. The face cap on the Lexus LS400 trunk lock is not re-usable?

- ☐ A. True
- ☐ B. False

16. The trunk lock on the Lexus LS400 contains how many tumblers?

- ☐ A. Six
- ☐ B. Seven
- ☐ C. Eight
- ☐ D. Nine

17. To remove the glove box lock on the Lexus LS 400, you must?

- ☐ A. Remove one screw
- ☐ B. Remove a clip
- ☐ C. Depress a spring tumbler
- ☐ D. Pick counter-clockwise

18. There are how many tumblers in the glove box of the Lexus LS400?

- ☐ A. Four
- ☐ B. Five
- ☐ C. Six
- ☐ D. Seven

19. All tumblers in the Lexus LS400 locks are numbered?

- ☐ A. True
- ☐ B. False

20. To remove the ignition lock on the 1996 Dodge Stratus, you must?

- ☐ A. Remove the radio
- ☐ B. Fuse panel
- ☐ C. Air bag
- ☐ D. None of the above

21. To remove the ignition lock on the 1996 Dodge Stratus you must?

- ☐ A. Turn ignition lock to the "ON" position
- ☐ B. Turn ignition lock to the "Accessory" position
- ☐ C. Remove a retainer screw
- ☐ D. Remove a roll pin

22. The ignition lock on the 1996 Dodge Stratus contains how many tumblers?

- ☐ A. Six
- ☐ B. Seven
- ☐ C. Eight
- ☐ D. Nine

23. To disassemble the ignition cylinder of the 1996 Dodge Stratus you must?

- ☐ A. Rotate the cylinder counter-clockwise
- ☐ B. Rotate the cylinder clockwise
- ☐ C. Pull a roll pin
- ☐ D. Remove an E-clip

24. To remove the ignition lock on the 1996 Dodge Stratus you must remove the knee-bolster?

- ☐ A. True
- ☐ B. False

25. The tumblers 4L and 8L in the Lexus LS400 are not used?

- ☐ A. True
- ☐ B. False

TNL



ELECTRONIC SECURITY TEST

COVERS TEST ARTICLES...

#129 July 1996
"Maggie" The Simplifier for
Electronic Locks

#132 August 1996
"Strikes, Doors and Adjusting
Your Jaws"

#135 September 1996
"Ground vs. Ground"

1. The MAGGIE is designed as a central point for wiring and controlling any magnetic lock?

- ☐ A. True
☐ B. False

2. The MAGGIE is designed for low voltage use?

- ☐ A. True
☐ B. False

3. KEYSW stands for Keys With?

- ☐ A. True
☐ B. False

4. DALM stands for Door Alarm?

- ☐ A. True
☐ B. False

5. RQE stands for Request?

- ☐ A. True
☐ B. False

6. NC stands for Normally Common?

- ☐ A. True
☐ B. False

7. COM stands for Common?

- ☐ A. True
☐ B. False

8. The MAGGIE contains a microprocessor that does all the sensing, timing and control?

- ☐ A. True

☐ B. False

9. With the MAGGIE installed, if a door is left open for more than 15 seconds after being unlocked an alarm/buzzer will sound?

- ☐ A. True
☐ B. False

10. On a properly latched door with an electric strike, the latch of the knob or lever extends fully behind the jaw or keeper of the strike?

- ☐ A. True
☐ B. False

11. On a properly latched door, the deadlatch will extend behind the jaw or keeper of the electric strike?

- ☐ A. True
☐ B. False

12. Typically one cause for electric strike problems is an incorrectly hung or operating door and frame?

- ☐ A. True
☐ B. False

13. Electric strikes with an adjustable jaw sacrifice some strength?

- ☐ A. True
☐ B. False

14. The Rutherford Controls 7-series electric strikes is designed for standard cylindrical style knob and lever sets?

- ☐ A. True
☐ B. False

15. The Rutherford Controls 2-series electric strike is designed for mortise locks?

- ☐ A. True
☐ B. False

16. To adjust the jaw on the Rutherford 7-series electric strike, you must?

- ☐ A. Loosen one screw
☐ B. Remove a clip
☐ C. Remove a roll pin
☐ D. Loosen two screws

17. The Rutherford 2-series does provide lateral jaw movement?

- ☐ A. True
☐ B. False

18. If removing/attaching the split pivot shim on the Rutherford strike, it must be done before the coil unit is attached to the lip/faceplate assembly?

- ☐ A. True
☐ B. False

19. T-lightning is Transient lightning?

- ☐ A. True
☐ B. False

20. When installing an alarm panel, it is not necessary to ground the panel?

- ☐ A. True
☐ B. False

21. Earth ground can be to a cold water plastic pipe?

- ☐ A. True
☐ B. False

22. When making wire runs to an alarm panel, aluminum wire is recommended?

- ☐ A. True
☐ B. False

23. To ground an alarm panel, it is recommended that an eight foot copper grounding rod be used?

- ☐ A. True
☐ B. False

24. A RJ31X is usually set up near the panel or where the Telco comes into the residence?

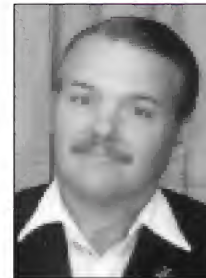
- ☐ A. True
☐ B. False

25. A trick to reduce lightning surges is to circle your runs outside the panel before cutting out all the slack.

- ☐ A. True
☐ B. False

BEGINNER'S CORNER

Servicing Tubular Locks



by
Jim Langston

For many, the thought of having to service or rekey a tubular lock is simply out of the question. Surprisingly however, once you understand the design of tubular locks and know what tools are needed to properly service it, the fear will quickly dissipate.

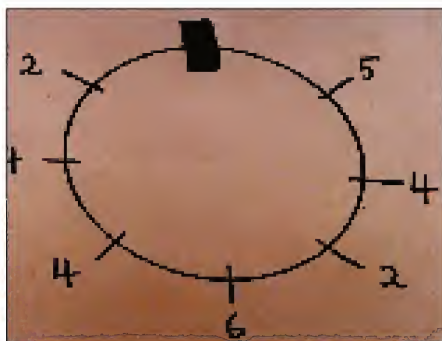
Tubular locks can be picked, decoded and rekeyed just like any other pin tumbler lock. If you need to rekey a tubular lock, you must have a rekeying kit made for tubular locks because the pins are completely different than standard pin tumbler locks. If you are going to pick it, you need a tubular pick. The pick in *Photograph 1*, is by HPC but there are different kinds of picks available. I would suggest trying as many tubular pick as you can before you purchase one because there are differences, and one will feel better to you than another.



Photograph 1.

To pick a tubular lock, you must torque the tubular lock pick - usually clockwise - to bind the pins while also pushing in on the pick. Next, release the pressure on the pick, and bind it again. I usually move the pick in a circular motion when I bind and release, bind and release. When doing so, do not apply excess torque on the pick. Light pressure is all that is necessary.

When the pick has turned just a small amount, stop and push in on the pick. Set the pick fingers to get the correct

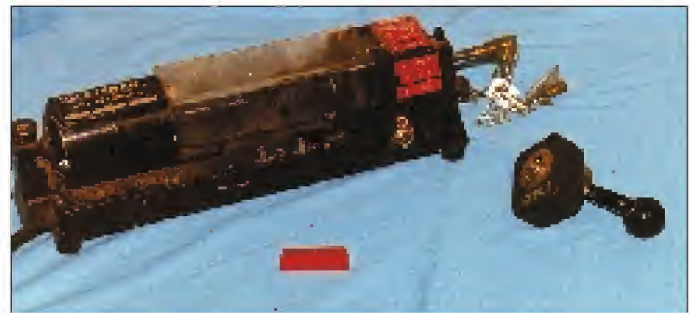


Photograph 2.

depth off the pins in the lock and then remove the pick. Now decode the depth of each of the picking fingers using a tubular key depth decoder. I usually draw a diagram of the face of the lock and decode the pick in the same position of the pins in the lock (see *Photograph 2*).

To cut and duplicate tubular lock keys, there are several different types of machines you can buy. An example of tubular key machines is shown in *Photograph 3*. As you can see, they vary greatly, so examine all possibilities. Shown in *Photograph 3* is a Scotsman supplied by HPC and a Herty Gerty supplied by A-1 manufacturing.

Tubular keys can also be impressed, however, I will cover that procedure another time.



Photograph 3.



Photograph 4.

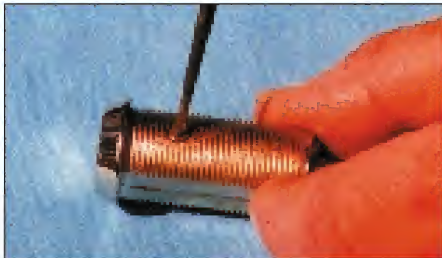


Photograph 5.

Continued from page 44

Duplicating tubular lock keys for many, does not possess much of a problem. When it comes to rekeying tubular locks however, that may be another story.

To rekey a tubular lock, you must first remove the retainer pin located on the side of the lock. To do so, use a punch to make a dimple in the center of the retainer pin (see Photograph 4).



Photograph 6.

Using a 9/64 inch drill and drill down approximately 1/8 inch in the middle of the retainer pin (see Photograph 5). Once drilled you can use an ice pick to pry the retainer out or use a tap and tap the retainer until it pulls out (see Photograph 6). I will

sometimes drill down until I feel the drill go through the pin and it pulls out with the drill bit. Caution must be taken when using this procedure. Don't worry about this pin. Your tubular pin kit should have replacement retainer pins in it.

Next take your following tool and push the plug out of the housing (see Photograph 7). With the plug out, remove all the pins, bottom and top. These will be replaced by new ones (see Photograph 8). If your top pin is a three, your bottom pin will be a three. Top and bottom pins must match. They are marked in your kit.

When rekeying the lock, make sure your bottom springs do not fall out. After you have replaced all of the pins in the plug, you can now put it back in the housing (see Photograph 9). When reassembling the plug in the housing, align the retainer pin hole with the plug housing hole when assembling. After the lock is back together, put the retainer pin on the side of the lock and tap it in place as far as it will go (see Photograph 10). This should have it all back together and your new key should now work. After a little practice, you can rekey tubular locks with ease.

Points to Ponder:

The trouble with wishful thinking is that it is usually, 99% wishful and 1% thinking. **TNL**



Photograph 7.




Photograph 8.



Photograph 9.

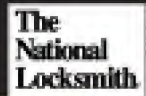


Photograph 10.



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COVER
STORY!

FIRE BREATHING FEROCITY!

by Brian Lamb

The Thermal Lance is a great ally of the safe technician. When all else fails, the Thermal Lance will do the job on any hardplate used in today's safes, (see *Photograph 1*). However, the original tool was not created for the safe industry and proved to be impractical.

Some of you may have heard of the "Burning Bar," the tool used prior to the Thermal Lance. The Burning Bar dates back to World War II, when it was used extensively for the removal of underwater obstructions in preparation for landings on the beach of Normandy.

**Hardplate, impossible to drill you say?!
Maybe so, but it's not impossible to *BURN*!**



**1. The PRIME-CUT
by BROCO.**

When the Burning Bar is used under water, the tool is even more effective than under normal atmospheric conditions because of the oxygen released from the water as it is broken down into its elements.

The Burning Bar consisted of a tank of oxygen and a very large, cumbersome pipe. The pipe was one inch in diameter and eight to sixteen feet long. Encased in the pipe were various materials such as a combination of steel, aluminum, iron and magnesium wires throughout their length, which aided in producing extremely high temperatures. When in use, the pipe was attached to the tank of oxygen and was ignited.

When the temperature of the pipe reached thermal reaction stage, the amount of oxygen was increased and the pipe would begin to consume itself. The temperature at the tip of the pipe would rise to approximately 10,000 degrees Fahrenheit, disintegrating anything in its path.

The Thermal Lance used today was developed for a variety of industrial applications, from maintenance of heavy duty equipment, to general factory maintenance, (see *Photograph 2*). The Thermal Lance is portable and can be carried by one man. Like the Burning Bar, it



burns at a temperature of 10,000 degrees Fahrenheit and can go through hardplate in a matter of seconds. The advantage of the Thermal Lance as a safe opening tool, is that it is capable of cutting through almost any type of material in existence, in a matter of seconds. With proper safety precautions, the Thermal Lance can even be used indoors.

The components of the Thermal Lance are as follows: oxygen tank, ultrathermic rods 1/4"x18" or 3/8"x18", torch holder with shield, striker plate, battery, and a 2-gauge oxygen regulator. Also included: Carrying case, safety goggles, welding gloves and a leather welding apron.

Before applying the Thermal Lance to a customer's safe, I highly recommend you practice on an old safe, in an controlled atmosphere with concrete floors. I also recommend you consider the following procedure, in the order listed.

1. Plan your attack.
2. Decide on a drill point.
3. If you're going to use a 1/4" rod, drill a 5/16" hole through the mild steel to the hardplate.
4. If you're going to use a 3/8" rod, drill a 1/2" hole through the mild steel to the hardplate.
5. Clear the area where the Thermal Lance will be used.
6. Cover the floor with welder-grade leather or some type of flame retardant material.
7. Adjust the oxygen pressure to 40-50 lbs. psi.



2. The Thermal Lance of today can be used in a variety of industrial applications, from maintenance of heavy duty equipment, to general factory maintenance.

8. Insert your rod into the torch holder.
9. Allow the oxygen to flow through the rod and check the torch holder for leaks.
10. Connect the torch holder to the positive terminal of the battery.
11. Connect the striker plate to the negative terminal of the battery.
12. Wear all personal safety equipment (welding apron, goggles and leather gloves).
13. Check for proper ventilation.

3. Once inserted into a pre-drilled hole, the Thermal Lance will only take seconds to burn through just about any grade of hardplate.



Now, you're ready to penetrate the hardplate. Place the tip of the rod on the striker plate and depress the trigger, releasing a small amount of oxygen to ignite the rod. Insert the rod into your pre-drilled hole and penetrate the hardplate, (see Photograph 3). Remember, it will only take a few seconds to burn completely through the hardplate. If you're not careful, you will burn into the lock case and damage the wheel pack or other internal parts of the lock.

After burning through the hardplate, allow the safe to cool, then check the hole you have created. Finish drilling through the mounting plate and lock case. Your container is ready to open! Note: You only need to use the Thermal Lance on the hardplate, nothing else.

Today's Thermal Lance is a great improvement over the fire-breaching, smoke-belching Burning Bar of the past. In the hands of a trained and practiced safe technician, the Thermal Lance is a sophisticated tool, penetrating formidable hardplate in a matter of seconds.

For more information on the Thermal Lance contact Lockmasters at: 1-800-654-0637.

The National Locksmith®



CAM & CABINET LOCKS

page 14-DHI

CHOOSING A TOP MASTER KEY

page 19-DHI

DO YOU KNOW WHERE YOUR KEYS ARE?

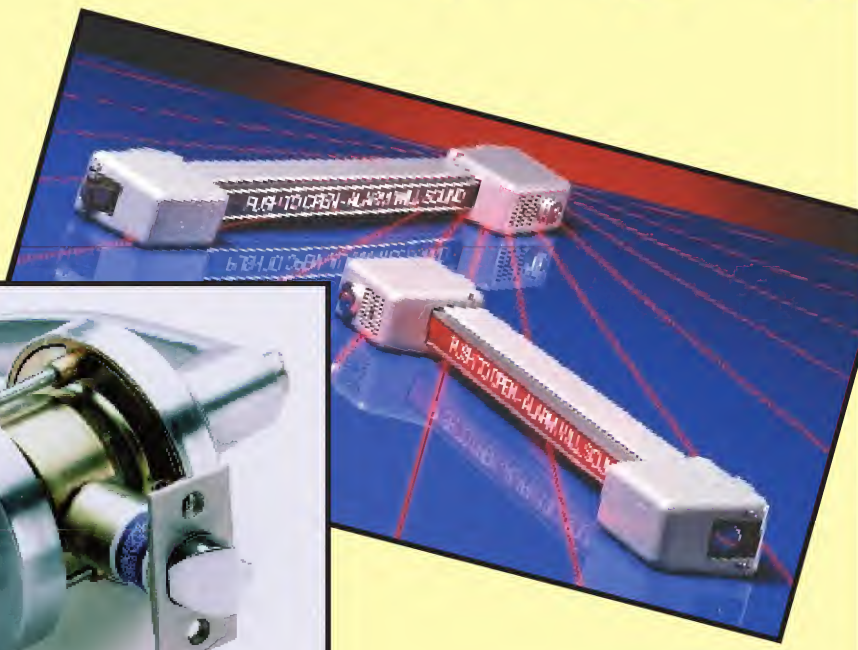
page 23-DHI

PRODUCT SHOWCASE

page 4-DHI

EXHIBITOR LISTINGS

page 28-DHI



Welcome to the Show!

On The Cover: The Key Watcher key control system, Marks Cylindrical lever set and the Detex exit alarm. All can be seen at DHI.



Welcome to the 21st Annual Convention and Trade Show of the Door and Hardware Institute. This special issue of The National Locksmith is the ninth annual issue designed to bring the locksmith specifier important news in the world of architectural and builders' hardware.

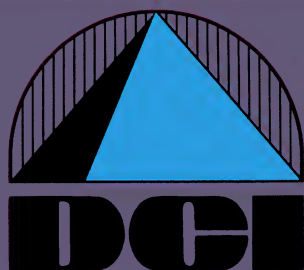
The theme for the convention is "Building Partnerships," and over 20 concentrated educational sessions will discuss this topic as well as explore technical issues of the future.

Host for this year's show is Cincinnati, Ohio. Cincinnati's unique overhead pedestrian skywalk system makes downtown travel very convenient by interconnecting all convention hotels with the convention center, restaurants, major department stores, movie theaters and a wide variety of retail outlets.

This year's convention has been streamlined to take place over three days, September 28-30, at the Dr. Albert B. Sabin Cincinnati Convention Center, 525 Elm, Street, Cincinnati, OH 45202. Show hours are 5:00 p.m. - 8:00 p.m. Saturday, September 28; 9:00 a.m. - 3:30 p.m. Sunday, September 29 and 9:00 a.m. - 1:00 p.m. Monday, September 30. The trade show continues to display every category of product and service related to the industry and provides the opportunity to see the latest products and trends.

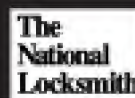
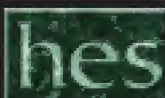
This issue contains booth listings for the convention. Also included on the following pages is our Product Showcase, presenting a wide range of product either being exhibited at the show or of interest to the industry.

Readers wanting more information on the products in this issue can circle the product's number on the Rapid Reply card, or send their request via Internet E-Mail to The National Locksmith at natllock@aol.com. America Online subscribers can send their request to NATL LOCK.



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PRODUCT SHOWCASE

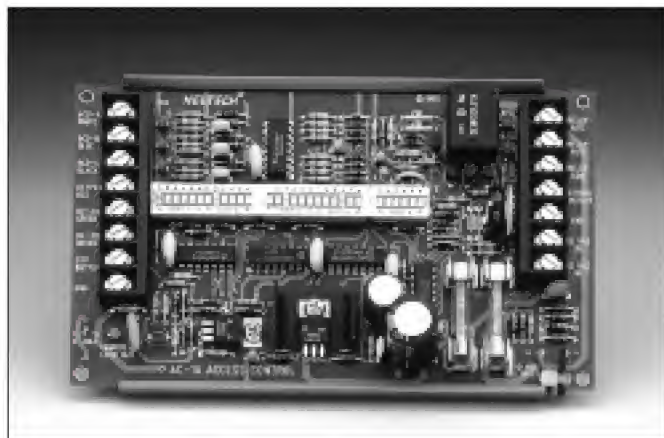
DHI - September 1996

Circle the numbers on the RAPID REPLY CARD and send it in.

Nel-Tech Weatherproof Keyless Entry System

Nel-Tech's Stormpad 6SP all-weather keypad and new AC-1A access control board offer a wish list of flexible features and ease of

installation. The Stormpad 6SP is hermetically sealed against rain, snow, and dirt, and has lighted buttons. When the correct code is entered at the keypad, the separate AC-1A controller board will activate any electric strike, magnetic lock, or overhead door. The access code is easily changed with simple slide switches. Tamper protection against random code entries is jumper selectable. An exit button input is also provided. The system is now available at American Lock and Supply through their American Access Supply Division.

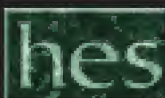


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Dorma Introduces Spring Adjustable BTS 75V Floor Closer

DORMA has introduced the BTS 75V adjustable-spring floor closer series with adjustable spring power size 1 through 4 and mechanical backcheck. BTS 75V closers can accommodate doors up to 3'6" wide in weights up to 260 lbs. BTS 75V closers are narrow-depth closers designed for thin-slab construction. They are adjustable within the cement case. Closers are available in



center, offset, or independent-hung applications, with a full complement of pivots and accessories.

DORMA has also introduced an ADA-compliant model in the BTS 75V series, the BTS 75V

BF. The BTS 75V BF closer is specifically engineered to meet interior and exterior barrier-free opening force requirements.

Sargent's Patent Pending Heavy Duty Mortise Lock Design

Sargent Manufacturing Company's new 8200 mortise lock, is engineered for easy rehanding while providing extra heavy duty components and unique security features that withstand high frequency or abusive conditions associated with lever handle operation.

The 8200's reversible latchbolt and locking mechanism designs are patent pending. These components allow the installer to configure the lock body to all four handing possibilities. Combined with a non handed guard bolt and curved lip strike, these features allow easy rehanding on site without disassembling the lock body.



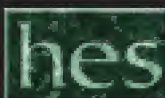
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The three-quarter inch stainless steel one-piece UL listed anti-friction latchbolt provides more contact surface with the strike, and a one inch stainless steel deadbolt with hardened steel rollers prevents the deadbolt from being compromised.

Dynalock's New #3203

DynaLock Corp. introduces it's newly re-designed #3203 Top-Jamb



door bracket that allows standard maglocks to be used with inswing door installations.

The #3203 features an exclusive fully adjustable inter-locking rib design that all but eliminates the need for shimming the armature or door frame to obtain the proper alignment and offset.

Securitron Introduces New Push Button For Ada Compliant Systems

Securitron Magalock Corporation introduces a new option for its popular PB2 family, the PB2H and PB2EH. The new push button incorporates the universal ADA symbol in a durable 2" button mounted on a stainless steel plate. The push button is available with a backlit



symbol with a red LED indicator light or without lights. The 10 Amp SPDT contact is perfect to control a variety of devices in ADA compliant systems.

Securitron is the leading manufacturer of electromagnetic locking systems and supports equipment for the security access control industry.

Sentex Introduces The Crown Jewel System

Sentex is pleased to announce the introduction of the Crown Jewel



System, the most advanced and elegant system ever offered for the gated single-family residence. The Crown Jewel is a small single-piece "No Phone Bill" system that is loaded with exciting features. Not only does this system include all the features offered in our traditional residential entry systems, it also provides time zone restrictions for the entry codes, modem programming and retrieval of the most recent 250 event records, timed and manual "Do Not Disturb" functions, a timed call forwarding function, the ability to call three outside telephone numbers, and a recessed, sidelit, sealed metal keypad.

Available in a variety of finishes (including all polished brass, all polished stainless steel, and a grained stainless steel faceplate with a painted black enclosure) the Crown Jewel can match the tastes and budget of virtually any homeowner.

All-in-One Maglock Kit From Adams Rite

Adams Rite Manufacturing Co. has introduced an electromagnetic lock kit that conveniently includes all the parts and pieces needed for a magnetic lock installation on hollow metal or metal stile glass doors. This "everything in one box" Maglock kit comes complete with a Monitored Pushbar, Series 1200 Electromagnetic Lock and Armature, Armed Loop Wire Transfer and Covers, Key Switch with LED, Rectifier, Plug-in Transformer, all miscellaneous hardware and easy-to-follow instructions.

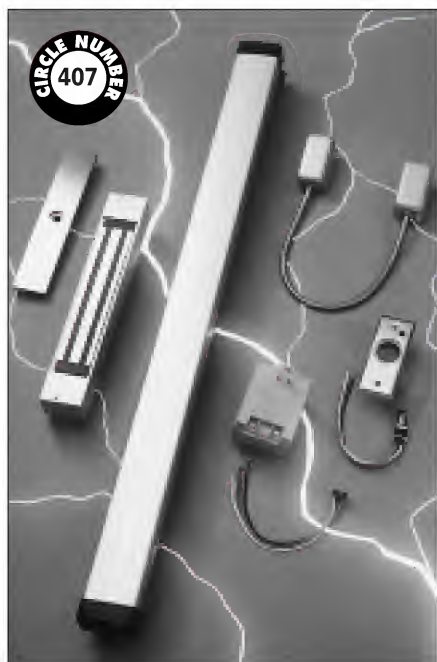
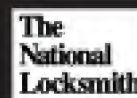
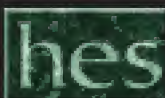
At the heart of the kit is the 1200 Series Electromagnetic Lock, which provides 1200 pounds of secure holding force. With the lock wired for normally closed, the exit door can be



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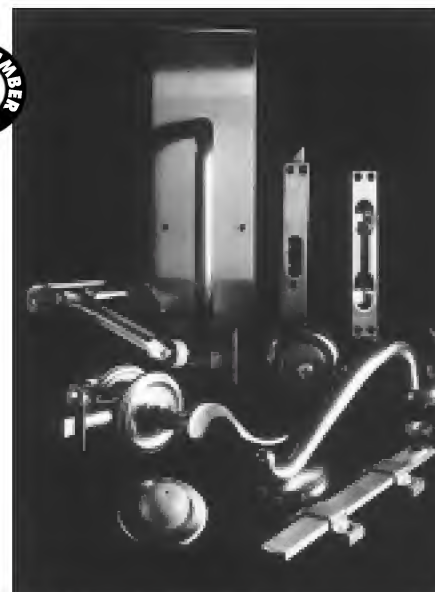
opened with a key from the outside or by depressing the pushbar for inside.

**Security Lock
Distributors Expands
Builders Hardware**

Known as the nation's "in depth" distributor of life safety and

security products, Security Lock Distributors has announced a major expansion in stock maintained for a number of the nation's leading builders hardware manufacturers. In addition, the company's customer service staff has been augmented with specialists in the specification, selection and application of such hardware.

Arrow, Ives, Bommer and LCN are among the companies represented in the expansion. Security carries their products in every style, function and finish and provides guaranteed overnight delivery plus a range of other services such as technical assistance, late hours, a free 500 page catalog and e-mail.

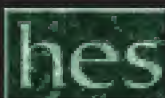


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Door King Stand Alone Receiver

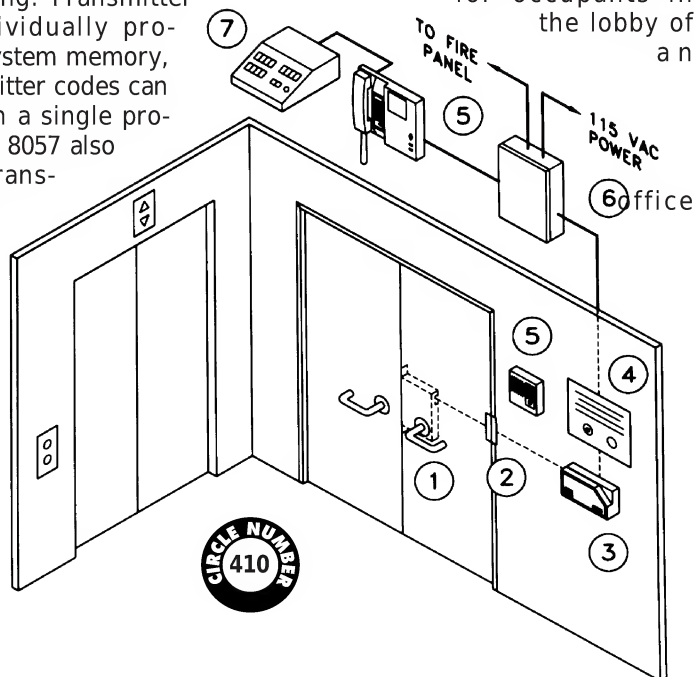
DoorKing has announced the addition of the Model 8057 Programmable Receiver to its line of RF access control products. The 8057 was designed as a low cost fully programmable stand alone intelligent receiver.



The 8057 uses Super Heterodyne circuitry in the RF section of the receiver. Super heterodyne circuitry offers superior performance over super regenerative type receivers, which are typically used in this type of product. The receiver is programmed directly from the keypad built into the housing. Transmitter codes can be individually programmed into the system memory, or a group of transmitter codes can be block coded with a single programming step. The 8057 also allows individual transmitter codes to be deleted from the receiver memory as needed. The 8057 can store up to 16,000 different transmitter codes and up to 10 different facility codes, and can be programmed to respond to a particular button on the transmitter.

SDC Elevator Lobby Door Locking System Provides Safety And Security

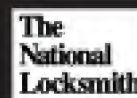
The Security Door Controls, SDC Elevator Lobby Door Locking System (Method B) provides safety for occupants in the lobby of an



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building and security for tenants leasing space in that same building.

Elevator Lobby Door Locking System (Method B) components include: SDC Model Z7850, HiTower Fail-Safe Electrified Mortise Lockset; SDC PT-4, power transfer hinge with (4) conductors; SDC Desk Console (Model TCC-MO-1GR), desk console with (1) Momentary Rocker Switch and (1) Green/Red LED indicator; SDC Model 432RKU, Red Exit Palm Push Switch with built-in Key Reset; SDC Series 600 Power Supply, with Emergency Control Relay and UR-2 Universal Control Relay Board; and a SDC System Engineered Package with component specification sheets, Point-to-Point Wiring Diagrams with connection to the building Fire Alarm Device and a Description of Operation.

Door Motion's New Duraswing

While the physically challenged are a very important and often overlooked segment of our society,

it has also become apparent that the elderly and those caring for young children may equally benefit from assistance entering and exiting public buildings.

DuraSwing Mark IV is where the problem and solution come together in form and function.. Key to the operator versatility is a patent pending SafeTek microprocessor, controlling all major door operating functions. Door movement is constantly monitored, insuring

efficient and safe operation during the opening and closing cycles. Environmental conditions such as gusting winds and building air pressures are compensated for automatically.

DuraSwing is designed for quick and easy installation, with each operator being tested and factory program-med to meet ADA standards and ANSI 156.19 codes. The operator can be used in an on-demand or Touch-and-Go application. DuraSwing can be operated by radio frequency transmitter, infrared scanner beam or direct wired push button. In addition, a built-in relay allows DuraSwing to interface with electronic lock strikes, card readers and security systems.



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Cabinet & Cam Locks

Timberline Supply

Timberline Supply has been in business manufacturing locks and locking systems for wood office furniture for 15 years. Timberline locks are high quality five disc tumbler locks. Today we will concentrate on cam and deadbolt locks for locking single doors and drawers. We will describe several different locks in detail, while giving an overview of others. First, the cam locks:

All housings on Timberline's cam locks, except one, are of a solid barrel construction designed to fit into 3/4" thick panels. These housings are available in either horizontal mount for doors, or vertical mount for drawers. Many different cams are available with differing lengths and setbacks, (see Figure 1).

Construction of all Timberline cam locks recently changed so that the

cams may be easily removed, changed and/or reoriented in the field. The cam plates fasten to the lock body using a 1/4" nut. The standard Timberline TL-100 Pin Tool will fit this nut, as will any 1/4" nut driver. When the nut is removed, only the cam comes off, the rest of the lock assembly stays together in one piece!

For flipper or tambour doors, Timberline has designed the CB-181 lock which has a notched cam to latch onto a special SP-181 strike plate. This slotted plate prevents the door from sliding open. (see Figure 2).

The CB-186 is a variation on a simple cam lock that allows two doors to lock together without the use of an extra spring catch or slide bolt on the opposite door. This lock, with its "L" shaped cam installs on one door with an SP-255 strike plate fixed to the

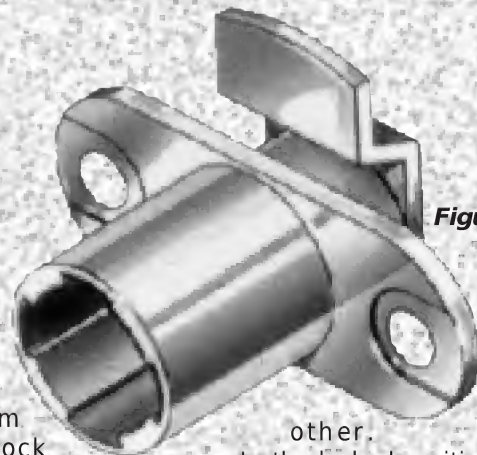


Figure 1

other.

In the locked position, the smaller part of the cam locks into the rail, while the longer part locks into the strike plate on the opposing door. In the unlocked position, both doors can be easily opened without the need to first release a catch or bolt. This lock provides a simple solution to a common problem, (see Figure 3).

Timberline locks feature a smaller diameter than most furniture locks. Every lock manufactured by Timberline Supply is available in five high quality finishes: Polished nickel, Old English, Black, Statuary Bronze

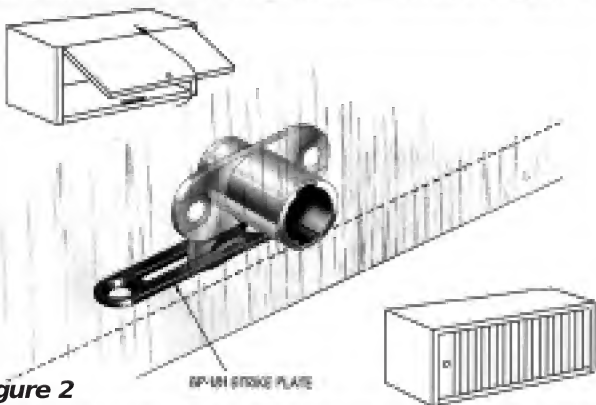


Figure 2

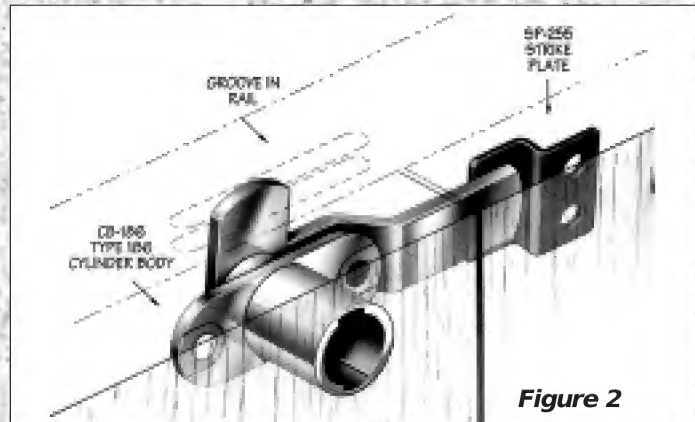


Figure 2

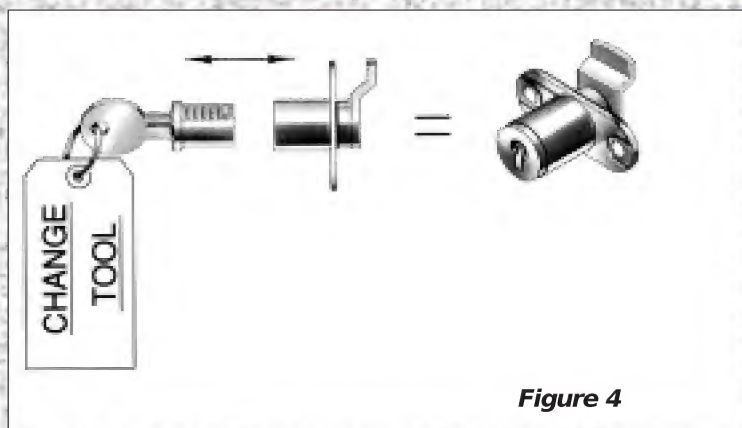


Figure 4

and Polished Brass. The combination of the small diameter and variety of finishes makes the lock almost undetectable which can only enhance the appearance of the furniture.

Changing the finish or key number is as easy as removing the lock plug and slipping in a new one. Lock plugs remove and install by inserting a special key called a "Change Tool" into the keyway and rotating the lock plug three quarters of a turn (see Figure 4). Whether you have to change a single lock or meet a complex keying schedule for a larger project, Timberline makes it a snap! There are over 500 different key changes available. The first 50 key numbers of each color are in stock and ready for next day shipment!

Timberline locks are identified easily by the key number that is stamped on both the key and the lock itself. The number on the key will be a three-digit number followed by a "T", e.g., 100T. The face of the lock will have the same three digits with the "T", then there will be another letter following the "T". This extra letter denotes which master key will open the lock. Every Timberline lock is master-keyed.

All Timberline locks are American made in our Lake Bluff, IL plant. We have a one day lead time for all standard product under 1000 pieces and there are no minimum order requirements. For information on Timberline locks call: 1-800-562-5227.

Steelcase Locks by Chicago Lock Co.

For the first time a factory original replacement cylinder for most Steelcase office furniture is available to you. This lock, patented by Chicago Lock Co., offers a variety of

options for the Locksmith.

Model P1076 Plug Assembly comes complete with six disc tumblers and can be purchased to any pre-determined code. Model CP-

1076 Sub-assembly is available less tumblers, and allows the Locksmith to set his own code series with service parts from the 99094 Tumbler Service Kit.

In addition to the Steelcase replacement cylinders, Chicago Lock offers key blanks for all four Steelcase keyways. Cylinders are also available in all four original equipment keyways.

This unique lock offers quick replacement keying by way of a "removal tool" that allows the plug to



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be removed and replaced in a matter of seconds. This tool is common to all keyways and all key codes. However, it does not represent a security breach since it is functional only when the lock is in the unlocked position.

Literally millions of desks are in service today that feature this patented design which has not been previously available to the general trade. This market represents a huge potential for the Locksmith to provide factory quality replacement locks and keys.

For more information and a free catalog, call Chicago Lock co., 1-800-445-3204.

Kenstan High Security Showcase Locks



Real key control and maximum pick resistance are now available in a variety of showcase and cabinet locks. Kenstan designed original Medeco High Security cores into a complete line of Deadbolts, Spring Bolts, Plungers, Ratchets, Z Bolts and "T" Bolt Plungers.

Arrangements can be made to supply your existing Medeco keyway in our showcase/cabinet lock bodies. Your keyway or ours, Kenstan locks can be retrofitted into existing applications with 3/4" and 7/8" hole sizes.

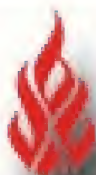
Locking Sliding Doors

The 1" and 2" wide KM 46/ KM 46CA Z bolt locks mount above or below the sliding door tracks. The "Z" prevents door "bypassing" or "spread apart".

Fixture receiver slots provide a "snug" fit for the housings; horizontal 3/4" frame holes allow the lock cylinder to "insert", engaging the bolt. A Phillips screw secures the cylinder in place and can only be accessed when the front door is removed.



Both housings accept Disc, Keymatic, or Medeco lock cylinders. For more information on Kenstan locks call: (516) 271-2700



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Fort Lock Corporation continues a tradition of being an industry leader through a very popular group of products with the security professional: Fort Lock's Multi-Function 23000 series and 29000 series Showcase Locks. These locks are packaged with two locking bars: 1 for sliding glass; and 1 for wood door applications. Both bars have a unidirectional tab stamped into the locking bars that allows the bars to be installed into the housing only in a locking direction. The lock housing also captures the glass and prevents spreading of the panels when locked. Both series have a removable plug that may be rekeyed to other manufacturers' key code programs.

**Fort Multi-Function
Mail Box Lock**

Fort Lock Corporation announces availability of yet another group of products for the Security Professional: the Multi-Function Mail Box Locks for interior mail boxes. Available in both National and Hudson keyways, the Multi-Function Mail Box Lock is supplied with the five most commonly used cams for American Device, Florence, Auth Electric, Miami-Carey, Bommer and Dura Steel. The pin tumbler construction meets USTS requirements and can be supplied in 200 combinations.



**Illinois Duo
Lock**

The Duo lock has
ten primary
tumblers arranged
into five sets of

opposed pairs in 14 tumbler, 12 primary, six sets in 17 tumbler. The tumbler sets (pairs) are composed of tumblers that are matched for internal piercing configuration. The external shape of these sets are arranged with spring slots that are

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the splines in the outer barrel, those angles are so arranged that this interlocking will cause the plug to be rotated in a retro-rotation (opposite direction) from the above plug rotation. This retro (return) rotation causes previously

offset to each other, when a spring is placed in this combined slot, it will push the tumblers in opposite directions. This results in one tumbler protruding up out of the plug and one down out of the plug, per set, into respective splines in outer barrel member of lock.

This spring tumbler arrangement frustrates tumbler-picking when the first tumbler of a pair is picked, and attempts are made to pick the second tumbler of this pair, the increased spring tension causes the first tumbler to snap back into locking position.

The external shape of the primary wafer tumbler is angled on the end which projects from the plug to engage into the splines in the outer barrel member of the lock. The barrel splines are also angled. The purpose of these angles is to cause an interlock between the tumblers and barrel when the plug is rotated and the tumblers en-gage

picked tumblers to snap back into locking position and frustrates tumbler picking attempts.

Positive Operated Tumblers

The Duo lock design is a positive operated mechanism. The primary tumbler piercing fits closely across both bitted edges (double biting) of the Duo keys, which makes the tumblers vertical position positive as related to the inserted key. When a proper key is inserted into the lock the primary tumblers will positively align and the lock will unlock. When an improper key is inserted into the lock, a positive locking will result, with the primary tumblers being positively held into locking engagement with splines of the outer barrel member of the lock. For more information call on Illinois Lock products call: (847) 537-1800.

TNL

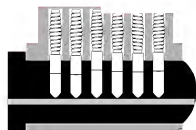


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CHOOSING A *TOP MASTER KEY*



Excerpted from *The National Locksmith's Basic Masterkeying Course*.
For further information or to order the course for \$149.95 please call (630) 837-2044.

Goals

The basis for every masterkey system is the Top Master Key. It is from this key that we generate all other keys in the system. If the Top Master Key is not a good one, the integrity of the system is at stake.

Therefore, it is necessary to choose a Top Master Key that will give us the best system possible.

This article will point out those guidelines necessary in choosing a proper Top Master Key.

Terms

TMK - Abbreviation for Top Master Key

TMK Ledger - A listing of the TMK's and relevant information used for creating masterkey systems. Used to make sure that two masterkey systems that are in use do not have keys that may interchange.

Top Master Key - The highest key of a masterkey system. The key that was used to build the masterkey system.

If you are working on a job with an existing masterkey system, the customer may already have a masterkey, and want you to pin the locks to it. This is risky unless they can provide you with a list of all of the keys issued and their bittings. While there are ways to do it mathematically, the techniques are advanced and beyond the scope of this article.

Like the other keys in your system, there are some rules and guidelines that need to be followed in creating the TMK. Theoretically, any key could be chosen to be the TMK, but some are far better suited to the pur-

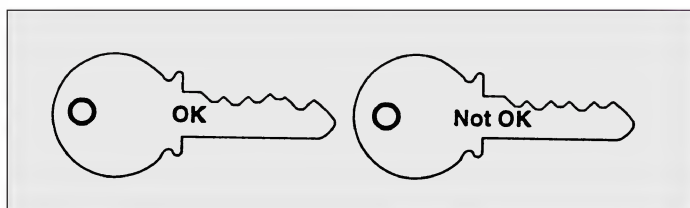


Illustration 1.

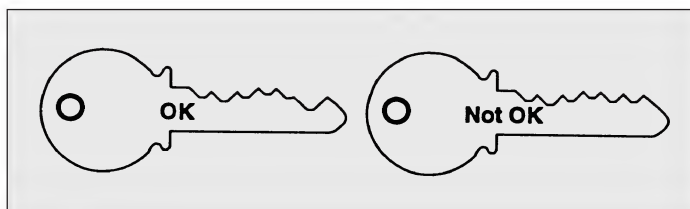


Illustration 2.

pose, and can prevent costly, time-consuming errors and difficulties later on.

- A five pin tumbler key cannot have the same depth in more than two spaces on the key. While 34325 may be used, 34343 should not, (see *Illustration 1*).
- A six pin tumbler key cannot have the same depth in more than three spaces on the key. Like the previous rule, 343236 may be used but 343233 should not, (see *Illustration 2*).
- No more than three adjacent cuts can have the same depth. This help prevents a straight key (see *Illustration 3*).

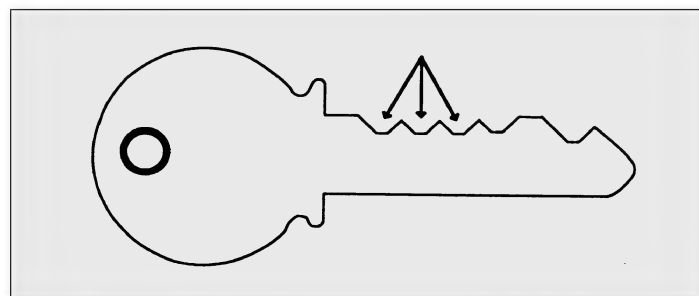


Illustration 3.

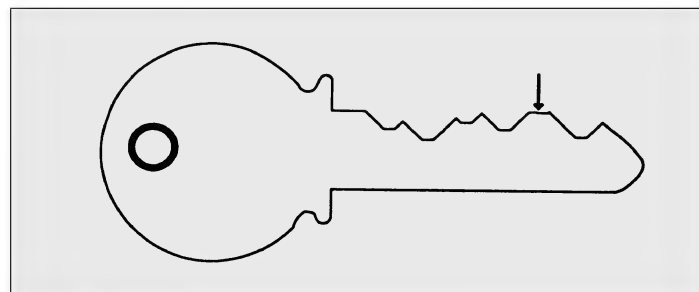


Illustration 4.

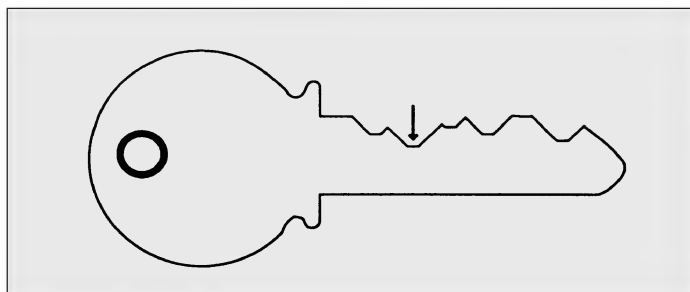


Illustration 5.

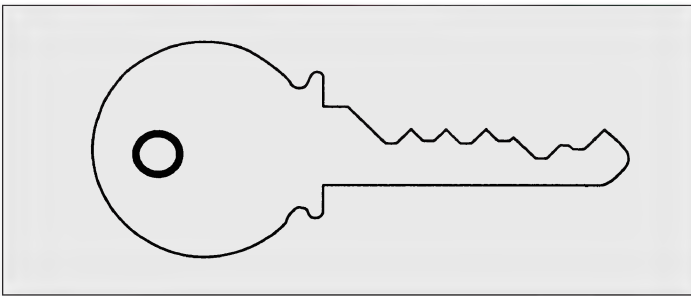


Illustration 6.

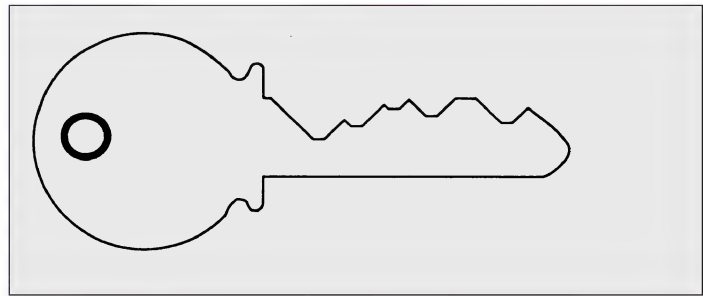


Illustration 7.

- At least one of the cuts (though preferably not in the tip position) should be of the shallowest possible depth. This prevents other keys from being filed down into a masterkey, (see *Illustration 4*).

- It is generally agreed to have at least one very deep cut as well, so that the bottom pins in each cylinder are not too similar, (see *Illustration 5*).

- A TMK should not have all high or all low cuts, (see *Illustration 6*).

- The cut nearest the bow of the key should not be extremely deep or the key may have a tendency to break off in the lock, (see *Illustration 7*).

- Do not use a staircase or declining step key. These keys may be

MANU.	KEYWAY	TMK BITTING	PARITY	SYSTEM #	LOCATION	NOTES
Schlage	C	16183	O E O E O	0001	Schmbrg	
Schlage	E	418305	E O E O E O	0002	Blmgdle	
Corbin	70-59	463515	E E O O O O	0003	Winfield	

Diagram 1. This sample of a TMK ledger gives just a brief idea of the information stored here.

able to be pulled out of the lock cylinder in the wrong position. This leaves the lock in an "unlocked" condition, where the plug can be easily turned with a screwdriver or similar tool, (see *Illustration 8*).

- The cuts on the key must be within the MACS guidelines. This is a physical limitation, (see *Illustration 9*).

As a final note to the treatment of the TMK, with every TMK and



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masterkey system that you create, it is critical that accurate records of all activity be kept. The first of these is the TMK ledger or register. This ledger is a recording of important and specific information used in creating each of your systems. The purpose of this ledger is to serve as a tool against creating identical masterkey systems or systems that are so close that keys from one system may interchange with keys from another system.

Information typical to a ledger is the manufacturer, the keyway or sections the TMK bitting, the parity, the system number, and additional notes. Other information, such as city or location, can also be useful as you begin to handle larger quantities of customers with masterkey systems. However, never include the job site or customer name on the TMK ledger.

(See Diagram 1. at left.)

The manufacture of the locks and key blanks, followed by the system and/or keyway being used are typically the first entries.

Following is the TMK bitting that is used.

The parity reflects the even and odd pattern of the TMK bitting. An O represents an odd depth for that space in the TMK bitting, an E represents an even depth.

The parity of the TMK protects against creating another TMK that is close to one you have already created, guarding the locks and keys of one system from "accidentally" interchanging with the locks and keys from another system.

For instance, should a customer in Schaumburg require a masterkey system, we have a ready reference of masterkey systems that are already in use there.

The ledger shows that you already have a system in Schaumburg using Schlage hardware with a C keyway. The TMK bitting for that system is 16183, and the parity is OEEOE.

In order to make the new system as dissimilar as possible to the others, we can manipulate the parity to create a TMK that is as different as possible from all the rest.

With the parity of the current system being OEEOE, we may want the new TMK bitting parity to be EOEEO, or some other variation that is different than the current system.



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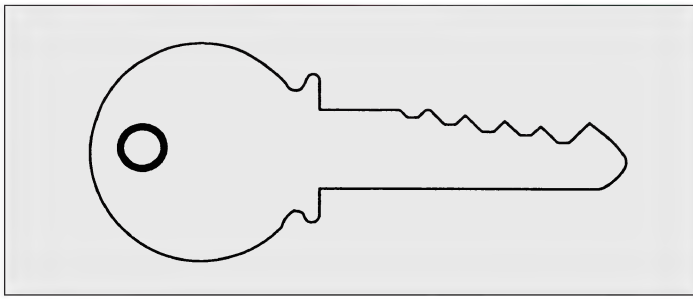


Illustration 8.

In high security masterkeying, parity may also refer to the angle or rotation of the cut, or other cut specifications particular to a manufacture.

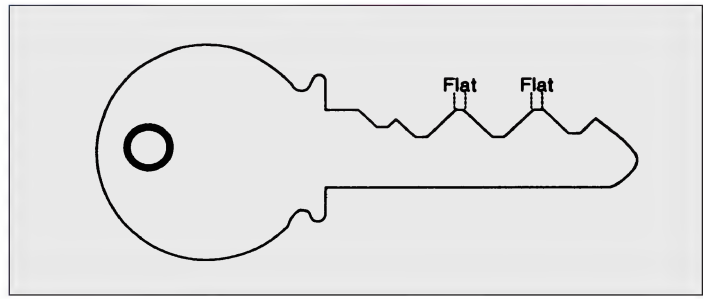


Illustration 9.

The system number refers to the number that you have assigned the progression charts, pinning charts, and bitting lists associated with the job.

Location simply gives a general location or area in which the system is employed and is listed to help detect and protect against the possibility of key interchange between systems used by different customers. If you hold a large number of masterkey customers, creating usable TM K's and systems can be a challenge.

It may be feasible in some instances, to use similar systems in two different areas that are far apart. Systems within the same area or location, however, need to remain different. Again, under no circumstance should the customer's name or job site be listed.

The note column at the end of the ledger can be used for special instructions or other information critical to the use of that system.

Keep the TMK ledger, as well as any other masterkeying information, in a safe location, where it cannot be seen or misused by customers or passerby's.

Summary

The quality and integrity of a masterkey system is dependent upon the bitting of the Top Master Key.

In choosing the best TMK, therefore:

- No more than 2 depths will be the same on a five cut key, and 3 depths on a six cut key.
- Three adjacent cuts will not have the same depth.
- At least one cut will be the shallowest cut in the system. And at least one cut will be the deepest cut in the system.
- The cuts on the key will not be all shallow or all deep.
- The deep cut will not be nearest the bow.
- The cuts will not follow a declining step pattern.
- The bitting will follow the MACS.

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Do You Know Where Your Keys Are?



by Allan J. Cross, CPP

Given the sophisticated keying systems available today, you should feel comfortable about your physical security. But do you?

In reality, the age-old problem of key control won't go away. Yes, you may have the best key/lock system in the world, but if the key issuer loses control, your entire system is in jeopardy. Effective access control requires accurate key control.

When you have to answer questions about who has which key, or which key opens which door, you come face-to-face with a messy key cabinet and an out-of-date card system.

Thankfully, a number of software products have been developed to automate the key control process. They range from: manufacturer-based programs, to simple in-house programs to specialized independent programs.

As helpful as most software packages are, there are definitely some shortfalls. First of all, a manufacturer-based program may only support their own keys. If you have a mixed bag, you



could have a problem. Secondly, you have to think about cost. Manufacturer-based programs can be very expensive! Then, you need to consider ease-of-use. Historically, these programs aren't very user-friendly, and you shouldn't have to be a computer guru just to manage your keys.

Now, an in-house program can sidestep a few of these problems. They are usually set-up on a

commercial database and are, as a result, less expensive and less complex. But, in turn, they may take several days or weeks to develop and ultimately offer very limited reports. More complex and specific programs can be written from scratch, but doing so is extremely costly and can take months or years to complete.

Key-Z avoids all of these shortfalls. It's flexible, inexpensive and easy-to-use.

Flexible: Key-Z supports any manufacturer's keys or locking system (e.g. combination locks, padlocks and controlled seals).

Inexpensive: With a list price of \$299.00 US currency, Key-Z offers a cost-effective solution to the key control task. Comparable systems are often priced at over \$1,000.00 US currency. Even general database programs that you would need to program are more expensive.

Easy-to-Use: Available for both DOS or Windows, Key-Z is easy to learn, even for the first-time computer user. In addition, there is very little typing or inputting since most of its data fields involve look-up tables (i.e. predefined lists of possibilities). You simply "point and click" to enter the appropriate choice.

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As easy as Key-Z is to use, its abilities are surprising. All of its complexity lies behind the scenes. It uses a fully relational database which relates keys (or combinations) to lock cylinders (or doors/locations) to keyholders. If you know one of these characteristics, or even part of one, you can relate it to the others.



Key Data: You can track information on keys using types, ID codes, finishes, biting codes and more.

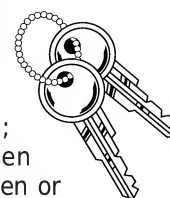
Lock/Cylinder Data: You can track information on locks/ cylinders using their ID numbers, locations, what keys fit and who has these keys.

Personal Data: You can record information specific to the keyholders, including their names, offices, locations, phone numbers and transaction dates.



Key Transactions: Using a special data entry screen, you can record each and every key transaction. This includes signing keys in or out or reporting them lost, found, stolen or destroyed.

Search Abilities: You can easily retrieve answers to questions about which keys open which locks; how many keys for each lock are in inventory; which keys have been reported lost, found, stolen or destroyed; and how many keys have been issued, and to whom.



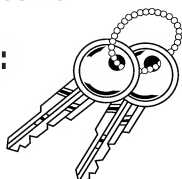
Since the database is relational, one piece of information will lead you to the rest. A found key cannot only be tracked to its owner, you can also determine where it fits. This type of query information is extremely useful and can be obtained instantaneously.



Reports: You can create neat, professional reports, putting to paper any information that you need documented on inventory, keyholders or transactions. You can even list unassigned, lost or stolen keys.

System Security:

Access to Key-Z's confidential databases can be limited using a system of user ID's and passwords.



Can you customize the program to meet your specific needs? Key-Z is an off-the-shelf software package that was designed to generically serve a variety of key control needs. This said, a number of user-defined fields allow you to customize the program to include information that isn't already tracked by the system.

Key-Z makes today's technology work for you. With just a few clicks of your computer mouse, you have all the key tracking information you need, up-to-date and accurate. It makes a miserable job easy, even for someone new to a computer environment. Help is never more than a keystroke, or a click, away.

Key-Z offers a paperless solution. No more cumbersome files and no more messy index cards. It's a key control software package that's easy-to-use, inexpensive and effective. It even comes with a selection of preprinted reports and a 60 day money back guarantee. Need to know more? Call the manufacturer, PPM 2000 Inc., at 403-448-0616 and ask for your free demo disk. It's that simple. **TNL**

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Blackhawk on Disk

Running COD

on Disk, a hardware key (plugged into the parallel port) is required to run the program.

The hardware key helps to keep everybody honest. If a customer claims a defective program, he or she can return the program (with the hardware key) to Blackhawk for replacement. If a less than honest person decided to copy the program, it would be useless without the hardware key.

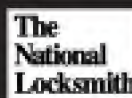
Some code programs have a number of the same basic code series repeated in various places on their diskettes, because the codes are sometimes used for different car models and/or years. Repetition of the same basic code series is not done with COD, so you save space on your hard drive and still have virtually all the codes of the other brands (and in some cases, more). Codes that are shared by different car models or years are cross referenced. When you choose a code number, the program will tell you every known application for the particular code number.

After the program was installed to the hard drive, you would point and click to “Codes on Disk” just the way you would start any Windows format program. *Photograph 1* is what you would see in the window. If you look in the top right hand corner, you will see the angled arrow that is controlled by the mouse. It is pointing to a small “up” arrow. Clicking there will make the window take up the full screen.

In *Photograph 2*, a pull down menu under the category “Setup” shows



2. A pull-down "Setup" menu shows some of the changes you can select.



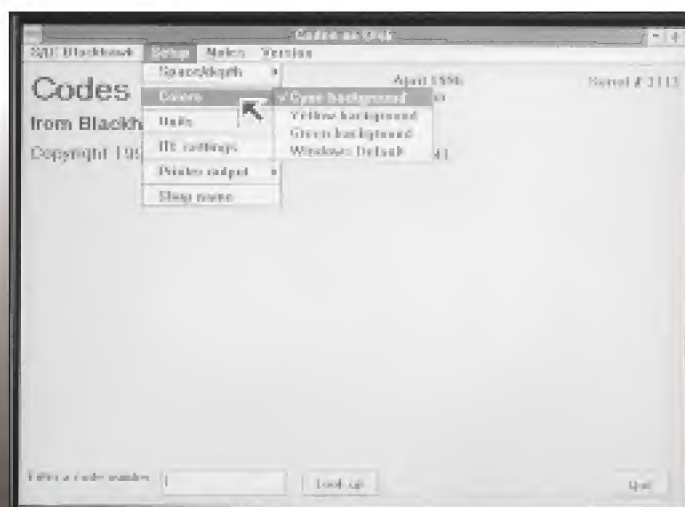
some of the changes you can select. The category "Space/depth" is highlighted in *Photograph 2*. Just to its right is another menu starting with the checked off "Blackhawk". What this does is to allow you to choose a default setting for spacing and depth information. That means that if you quit the program and reload it later, that setting will be on the screen.

Your choices are: Blackhawk, Baxter, 1200CM, HPC punch, CodeMax, Curtis, Framon, ITL, Exacta, A-1 and DC300.

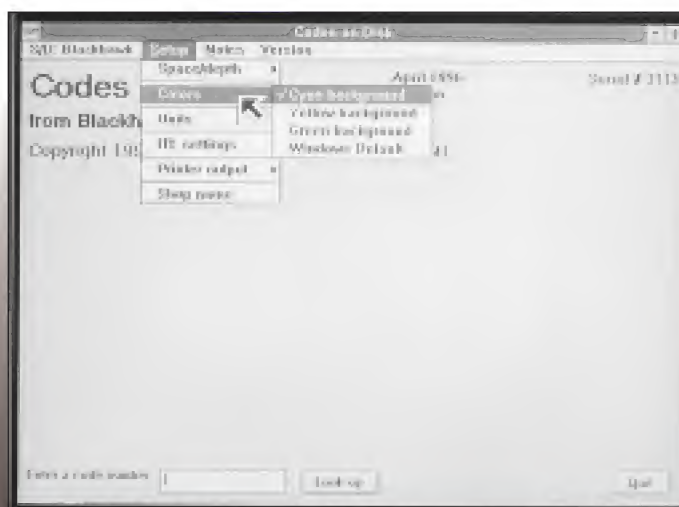
Photograph 3 shows the color selection, and *Photograph 4* shows the unit of measure. You can choose "English" (inches) or "Metric". If you have an ITL 9000 computerized code machine, *Photograph 5* shows the

setting choices.

The menu at the far left on top is highlighted in *Photograph 6*. This allows you to change back and forth to different space and depth settings without affecting the default settings. It also shows the function keys that should be pressed, if you don't choose to use the mouse. This gives you the same choices as the Space/depth



3. The window background color option is shown.

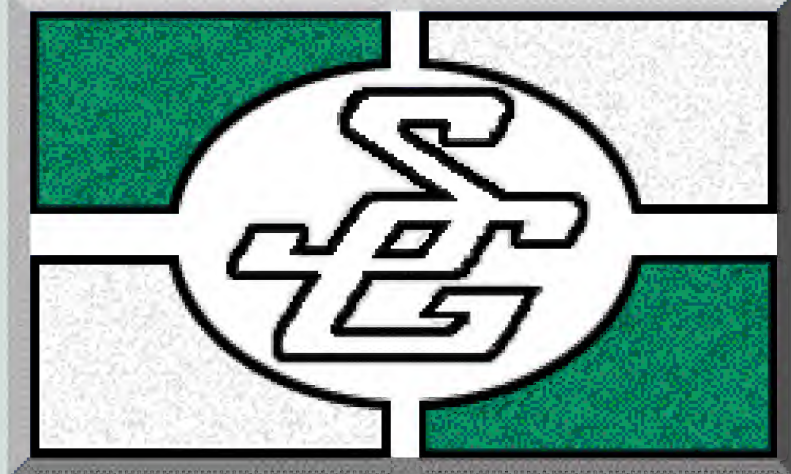


4. The unit of measure between "English" or "Metric" can also be selected.

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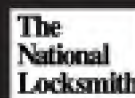
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category under Setup.

Here is an example of how it might work. If you normally use a Framon code machine, you might make your default setting: "Framon". If you occasionally use an Exacta key punch, you might point and click to "Exacta" or press the F7 key, when you were going to use that machine to make a key by code. If you quit the program

and then start it up later, it will automatically return to the "Framon" setting.

Selecting a Code Number

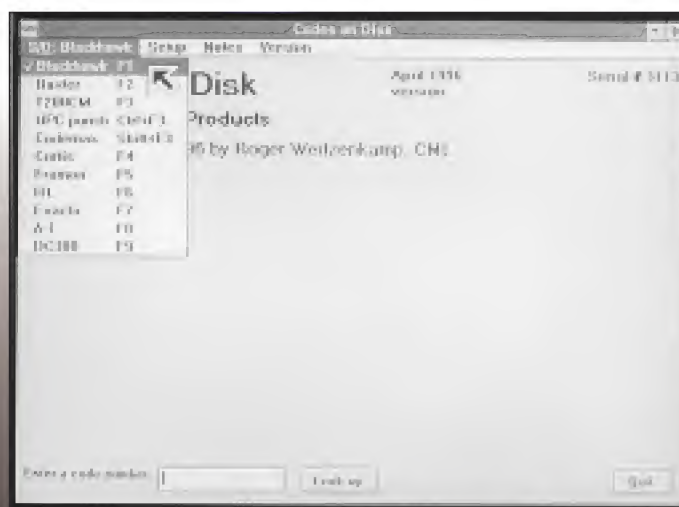
If you look back to *Photograph 1* (the start up screen), notice a requestor near the bottom that says "Enter a code number:". The box just to its right is where you type in your

code number. If you were to type in: D234, you would see the screen in *Photograph 7*. At the top left (below the menu categories) you will see: "Code number D234 : 14 series found." Below that you will see a box with a very descriptive listing of those 14 series.

That list is the key to the program's simplicity. You don't have to tell the



5. If you have an ITL 9000 computerized code machine, setting choices can also be selected.



6. This menu allows you to change back and forth to different space and depth settings without affecting the default settings.



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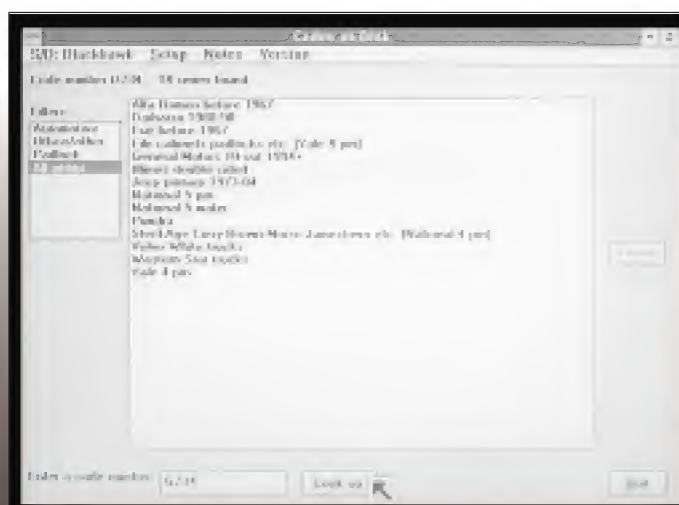
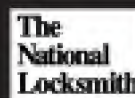
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7. Once a code is looked up, a very descriptive listing of that code series is listed.



8. Another code number has been searched and 13 different possibilities have been displayed.

program anything more than the code number. It searches all the codes to find a match and then lists every possible code series that could apply. The descriptive list gives you enough information to let you know which code series is the one you need.

To the left of the box with the code series list, you will see a smaller box headed by the description "filters". There can be three different filters:

Automotive, Office/ other and Padlock. They can be used to filter out code categories that don't apply. If you know the code you're looking for is for a car, there's no need to look at office or padlock codes. I'll demonstrate how it's used shortly.

Let's say that I realized the correct code number was "G234" and not "D234". On the bottom of that same screen, I have entered the new code

number. The mouse controlled arrow is pointing to the box with the words "Look up". I can either click the mouse or press the enter key, and it will search for the corrected code number.

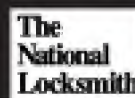
In *Photograph 8*, the program has searched for the new code number and has apparently found 13 different code series that could apply. Since I know it is an automotive code, I can



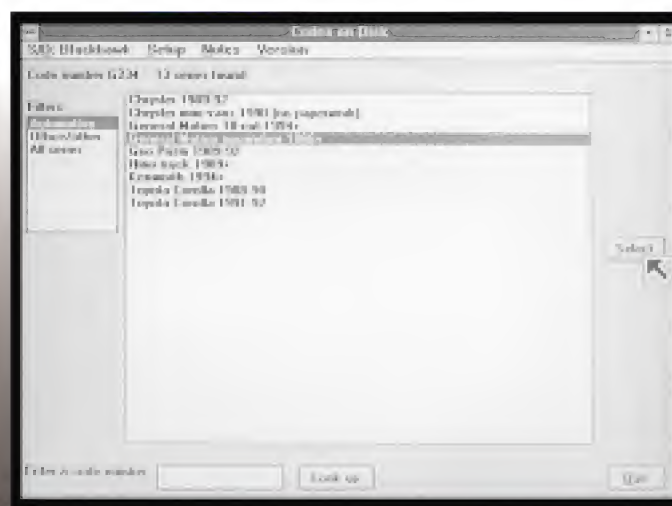
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9. After choosing the "Automotive" filter, every series that is not automotive disappears from the box. Only nine of the original thirteen series remain.



10. The "General Motors secondary 1966+" has been highlighted and only that code will be shown.

choose a filter to remove the clutter of all non-automotive code series. Notice there is no listing of "Padlock" under the category of filters. That's just because there are no padlock codes listed in that group of 13.

After choosing the "Automotive" filter, every series that is not automotive disappears from the box shown in *Photograph 9*. Only nine of the original thirteen series remain. In *Photograph 10*, I have highlighted "General Motors secondary 1966+" and have moved the mouse controlled arrow to the box that says "Select".

Photograph 11 displays all the code information in the format of the default setting, which was "Blackhawk". Near the top right hand of the screen, it indicates that the cuts are listed bow to tip. The actual cuts for the particular code number are listed as: 312444. Equivalent key

blank numbers are shown for Curtis, Ilco, Silca and Briggs (now known as Strattec).

Since the Blackhawk format is strictly dimensional information, the spacing and depth information for this particular code number is listed in the box to the right. There are a number of on-screen commands possible by clicking on one of the many boxes shown. If I had the information I needed, I could click on "Quit" to end the program. If I wanted to print the data that was shown on the screen, I could click on "Print".

By clicking on "Add label", you can make special notes for the particular code series. Let's say for instance that the codes were listed tip to bow instead of the more common bow to tip. Even though that information is listed at the top of the screen, you may have not noticed it and cut the key

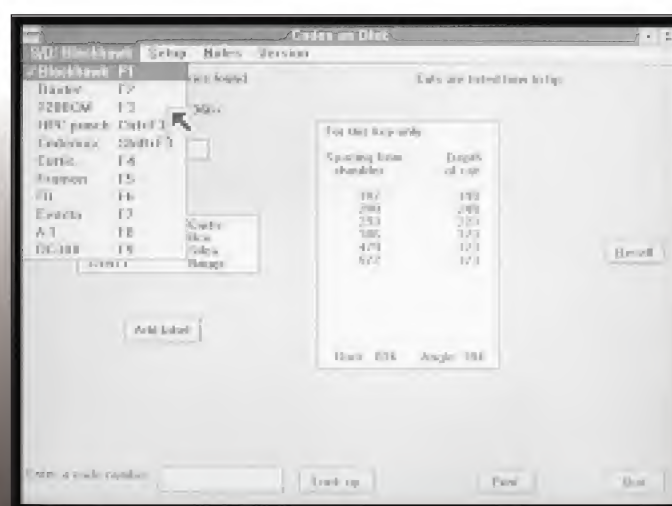
backwards for an import blank of which you stock very few. You may want to put an additional warning to yourself in that label area of the screen.

Changing Space/depth Format

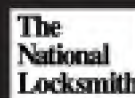
If you want to make a temporary change in the space/depth format, you would pull down the menu to the far left, shown in *Photograph 12*. You have eleven options to choose from. I'll demonstrate a few of them. *Photograph 13* shows the format for use with an HPC 1200CM code machine. "1200CM" is displayed at the top left hand corner of the screen. In place of the dimensional information that is normally included in the Blackhawk format, the replacement box indicates: "Use card #25". In this format you will be given



11. All the code information in the format of the default setting, which was "Blackhawk".



12. This is the menu in which you would make a temporary change in the space/depth format.



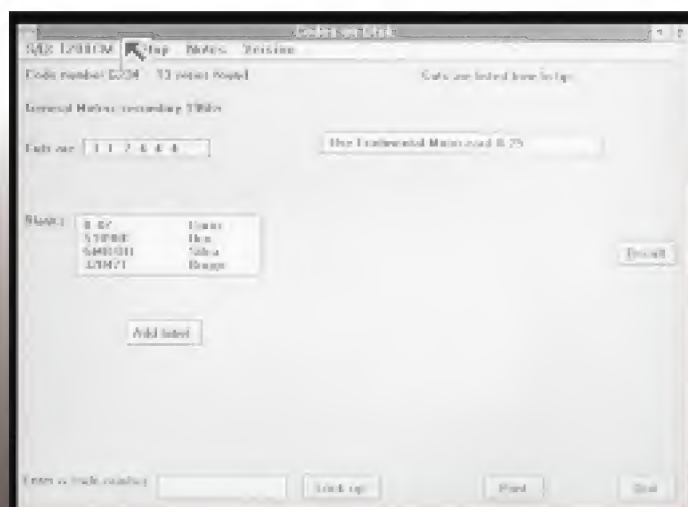
the proper code card that works with the particular code. If you don't own the proper code card, you can use the dimensional information from the Blackhawk format and use a micrometer card with your HPC machine.

Photograph 14 has "Curtis" in the top left corner of the screen. This is for use with a Curtis code cutter

(commonly known as the Curtis Clipper). Cam and carriage (and cutter) information are included in this format.

Similar information would apply to the other code cutter formats. Key holders, knobs or other specialized attachments would be listed. It is very simple, almost effortless to use this code program.

For more information about COD and other locksmith software, contact: Blackhawk Products, 25913 County Road T.5, Dolores, CO 81323; Phone: 970/ 882-7191, FAX: 970/ 882-7228. In upcoming months, we'll be taking a close look at a couple of other code programs available to the locksmith. So boot up your computer and stay tuned. **TNL**



13. HPC 1200CM code machine information is also available.

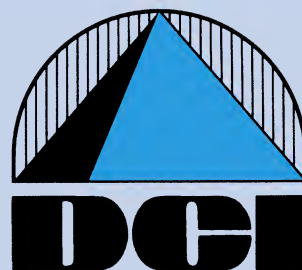


14. Curtis code cutter (commonly known as the Curtis Clipper) information for cam and carriage is also included.



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FOR ENSICS - THE NEWEST FIELD IN LOCKSMITHING

by Donald Shiles

Locksmithing as we know it, has been evolving for thousands of years. It has progressed from the village blacksmith to the highly qualified and technical individual who can service mechanical, electrical, electro-mechanical, computer operated, and all of the other types of locks and devices which are on the market. For those persons with a special interest or background, there is a new/old field which needs your skills.

FORENSIC LOCKSMITHING

What is Forensic Locksmithing? If you were to look up the word forensic in the dictionary, you would find that it means: of or suitable for a law court, public debate or formal argumentation. In practical use, it has come to mean, something that can be scientifically verified and, the results of which, will stand as evidence in a court of law, or evidence which can be used by an investigator to assist in solving a crime.

How does this apply to locksmithing? There is a tremendous need, albeit often unrecognized by the people who need it the most, for experts who can appear as witnesses in court and testify for the prosecutor, the defense, or an insurance company, that a lock has not been opened with something other than a working key. For example: Imagine what it would mean to an insurance company if they could prove that a home or automobile had been opened or that the car had been driven, using only an authorized key. Cases of fraudulent claims for theft, destruction, arson, etc., could be successfully contested in court.

A defense attorney, who could prove in a criminal case that an attempt had been made to pick open a lock, could thereby instill a reasonable doubt that his/her client who had the only working key must not have been the culprit. Or consider a prosecutor who could prove that a room had not been entered except through the

doorway, the lock was opened with a working key and the defendant was the only person with a key. Just as important is the advice and professional opinions a forensic locksmith could offer to investigators to help determine whether a crime was committed by an amateur, a professional; an employee or an outsider.

IS IT FOR ME?

Who can become a forensic locksmith and how? There are several skills, talents, or experiences required to be a successful forensic locksmith. You must, first and foremost, be a knowledgeable locksmith, who has the ability to inspect/examine all types of locks and devices, who understands how they work and their weaknesses, and can identify abnormal or unusual marks on the working parts. The second necessary skill is you must have an analytical mind, and investigative experience and/or training is extremely helpful. These are the technical skills required, the other characteristics that are beneficial are the interest in accepting and overcoming challenges/enigmas/puzzles and the ability to communicate clearly in speaking and writing.

What do I look for when investigating a crime scene or piece of evidence? I determine, by visual inspection, how I would attempt to open, by-pass, or otherwise, neutralize a locking device. I would then take a similar new device and attempt those various techniques to determine what types of evidence or indications those attempts leave. I then scientifically examine the evidence for similar markings.

Obviously, I can not teach you to be a forensic locksmith in this article, but I will give you some ideas as to how to go about learning more about it. Let me give you a proposed sample list of the type of tools/equipment you will need to have available to conduct a forensic examination of a lock or

locking device. These tools are not necessarily expensive or highly technical, but they are, in my opinion, essential, especially those marked with an asterisk.

TOOL KIT

- *1. Pens, pencils for recording information and drawing sketches.
- *2. Felt tip markers for marking evidence.
- *3. Sketch pad and/or graph paper for making sketches or layouts of the scene (graph paper works well for floor plans, etc.)
4. Colored pencils are handy when drawing sketches to show the differences between natural/man-made items, to indicate the location where items of evidence were found, etc.
- *5. Camera and lenses, a good 35mm SLR with a Macro lens is essential, other lenses, filters, etc. are nice to have if you know how to use them. If not, I suggest you leave the photography to a professional.
- *6. Pocket ruler in inches and metric for fine measurements and for placing in photographs to depict the scale of an item being photographed.
- *7. A 50/100' tape measure is handy.
- *8. A quality magnifying glass (Sherlock Holmes used one.)
9. A fairly powerful magnet - useful for several things, such as collecting filings from the scene; differentiating between steel and brass/aluminum, and separating steel parts or filings from the remainder of the detritus (debris).
- *10. A microscope. A good quality microscope with photographic capabilities is invaluable in your lab, although for your tool kit you only need a 30 power, hand-held microscope. This does a terrific job in examining lock pins and other small parts for marks and costs under \$20.00. There is also a 100 power handheld microscope for under \$20.00 which works extremely well in differentiating between individual

marks. You can often tell which mark was made last; i.e., a key mark or pick mark. However, this microscope is much more difficult to use.

*11. A basic locksmith's tool kit with the necessary tools to remove, disassemble and examine various locks, etc.

*12. Plastic baggies, paper envelopes, and masking tape - used to preserve, protect, and separate evidentiary items. The tape can be used to seal the bags and you can write on the tape.

13. Disposable rubber gloves.

*14. Various flashlights/ specialty lights.

15. A tape recorder, you can use it to record your thoughts, findings and opinions as you work on the scene. I prefer a voice activated micro-cassette recorder because of its convenience, but any type will work. Remember to carry extra batteries and do not come to depend totally on this machine, they fail at the most inopportune times.

16. A mirror on a telescoping arm - to look for marks on the bottom sides of door, etc.

17. A compass to assist in locating north to orient your sketches and drawings of the scene.

WHAT TO LOOK FOR

Beyond the obvious things, such as tool or jimmy marks, which any self-respecting police officer or investigator will discover, there are some not so obvious things only you, as a locksmith, would find and recognize. A short list of some of these are:

1. Wrench marks around the face of a rim cylinder lock showing that it has been removed.

2. Scratch marks on the face of the lock, at the base of the keyway, showing where the turning wrench slipped during a picking attack.

3. Scratches around the upper portion of the keyway showing where the rake or pick slipped out of the lock.

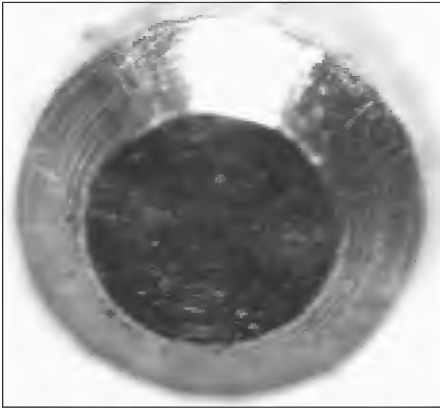
4. The heavy indentation at the top of the keyway showing that someone has impressioned or attempted to impression a working key.

5. The marks that ONLY you, or someone like you, could find, the marks on the face of the pins, wafers, or levers showing that the lock has been penetrated by something other than a working key. On a pin tumbler



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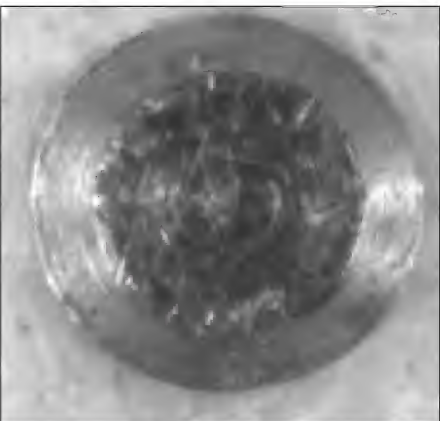
1. Brand new Kwikset pin from pin kit.

lock, these marks are relatively easy to read and decipher. You can learn for yourself what they look like if you do as I did. Take a cylinder lock and load it with new pins. First examine the new pins (using a microscope) to see what they look like fresh from the pinning kit (*Photograph 1*).

After examining a new pin, open a lock loaded with new pins several times with a working key, remove the pins and examine them (*Photograph 2*). Compare the difference between the new and picked pins. You will notice faint scratch marks on the bottom of the pins that had been opened with a key.



2. Kwikset pin after being opened twice with a key.



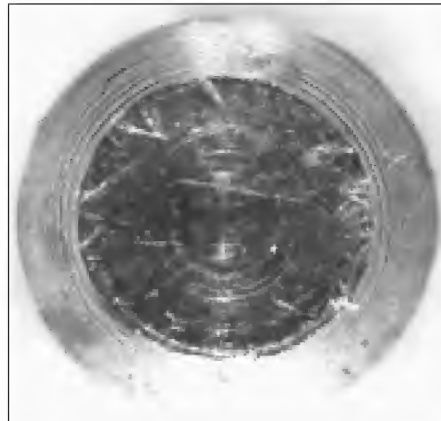
3. Kwikset pin after being picked opened twice.

Now reload the lock with new pins and pick it open once or twice and examine those pins (*Photograph 3*). You will notice an assortment of scratch marks on the bottom of the pins that had been picked. Reload a lock with new pins and rake it open with picks. Defined scratch marks are much more pronounced (*Photograph 4*). Also notice the difference between the marks on the pin in the first chamber as opposed to the marks on the pin in the last chamber (*Photograph 5*).

Now reload a lock with new pins and open it with a pick gun. A spattering array of scratch marks can be seen (*Photograph 6*). Reload the lock with new pins once again and open with an electric pick gun. Because of the rapid intensity of the electric pick gun, a mushrooming effect can be seen on the bottom of the pins (*Photograph 7*).

Do this using every technique you know and every tool you have, always starting with a new set of pins and examining them immediately after opening. You will see definite differences in the marks being made. You should also look for marks on the shoulders or sides of the pins which could not be made by a working key. In some cases, you may have to cut the cylinder in half and look for pick marks on the edges of the pin chambers.

With this type of experience, training, and practical application, you could stand up in court and, as an expert witness, give your opinion as to what was done to the lock. Remember, preservation of evidence, and the proper use of chain of custody is extremely important. Let me tell you that I know of no way that anyone can testify that a lock was picked open. However, you can testify that it



4. Front Kwikset pin after being raked open twice.



5. Back Kwikset pin after being raked open twice.

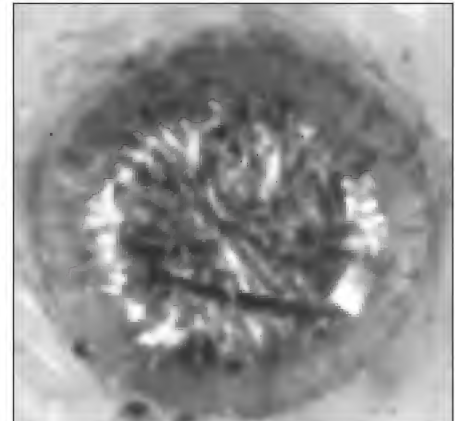
was not, or you can testify that a certain type of tool was inserted into the lock in an apparent attempt to open it.

Remember, there are two types of evidence which can be used in a court of law and which assists an investigator in identifying the culprit or ascertaining what probably happened in order to conduct a better investigation. Since the word forensics means suitable for formal argumentation, I guess that is why everyone wants to argue about Forensic Locksmithing.

TNL



6. Kwikset pin after being opened with a pick gun.



7. Kwikset pin after being opened with an electric pick gun.

The LIGHTER Side

Party Time



by
Sara
Probasco

"I found this key ring on the sidewalk," a man said, placing a bunch of keys on our front counter. "Couldn't help noticing one of the keys had the name of your store stamped on it. Thought you might know who they belonged to." With a friendly wave he was gone, before anybody at our store got his name.

There were six keys on the plain ring: a Kwikset key that had been bent almost double, a Toyota key, a tiny key which probably locked a diary, a couple of padlocks keys, and an Arrow key stamped with our name on one side and a double-digit numeral on the other.

"That Arrow looks like the key to my church," one of our employees volunteered. He compared his own key to the one in question and verified his observation.

I called the church office. The person who held the key bearing that number was someone known to me, so I called them.

"Have you lost a set of keys lately?" I asked.

"Not that I know of," Henry replied.

"What kind of car do you drive?" I asked.

"A Ford pickup," he said. "But Marge has a Toyota."

When he came to pick up the keys, he admitted that he suspected one of his teen-aged boys had borrowed the wife's keys and mislaid them.

"I suppose we should get the house rekeyed, one of these days," he admitted.

"Have you lost other keys?"

"Not that I know of, but somebody got into the house when we were on vacation, last month, and had a week-long party, from the look of things. When we got back, furniture was overturned, tapes and records strewn about, beer cans and junk food wrappers all over the place. Our pillows and blankets had been pulled off the beds and dragged into the

family room, and there were dirty dishes everywhere. They had even gone through the freezer and refrigerator, helping themselves."

"I'm sure you notified the police."

"We did, but there wasn't much they could do. Nothing of value was taken, so far as we know, but it sure was a mess."

"No clue as to who was involved, I suppose?"

"Oh, we know who was there — some of our son's friends from school. I have all their names."

"Then why...?" I sputtered.

Harry shrugged. "The police said it was hearsay evidence, and there was no way we could prove anything. Besides, nothing was permanently damaged or stolen. They told us these 'break-in parties' are the latest fad with teenagers, right now. It's their contention that the less attention is

drawn to the activity, the sooner they'll quit doing it."

"So what did you do?"

"We thought about going to the parents, but a couple of the guys involved were pretty tough characters and their families were worse. In the final analysis, Marge and I decided maybe the police were right — that it might be better to leave well enough alone, rather than stir up a hornet's nest."

An old phrase came to my mind — something to the effect that all it takes for evil to prosper is for good men to do nothing.

"Did you see that bent Kwikset key on Henry's key ring?" I asked Don later that evening. "how do you suppose it got that way?"

"It looked, to me, like the work of that 'Magician for Christ' fellow who came through here a couple of years

Continued on page 114



Continued from page 112

ago. Don't you remember? The guy had some gimmick about bending keys with prayer, or some such. A lot of people came to us that next week to get their keys straightened out or have new ones made from keys that got broken."

"I had forgotten about that," I said.

"Well, you know what they say: 'It's hard to be nostalgic, when you can't remember anything.'"

Laughing, Don ducked as I hurled a dish towel at him.

The next morning, I heard about a "tea party" where ladies who attended left their handbags in a bedroom just inside the front door and congregated in a back room of the house. While they were enjoying their refreshments, someone entered the house through the unlocked front door, helped themselves to the contents of the ladies' purses, and beat a hasty retreat, undetected.

"What's the world coming to? It's getting to where you can't even enjoy a party without worrying about somebody stealing you blind," I sputtered to Don. "Why don't we just invite the burglars in, and have it over with?"

"Some people did a few years back, if you recall," he responded. "Remember the rash of burglaries that followed the Christmas tour of homes?"

"Yes! All those lovely homes that were on display to raise funds for the library, and then somebody came along and broke into several of them! Did the police ever find out who was responsible?" I asked.

"Not that I know of. They were pretty sure it was either somebody who went on the tour or somebody who heard about the expensive furnishings in those homes and came back later to help themselves. Either way, it was enough to keep people from volunteering to open their homes again for several years after."

"You know that cook book on party planning that I've been thinking about writing?"

"What about it?"

"Well, in light of our conversation yesterday, I wonder if I should include a section about security measures."

"Probably a few foot notes would be all you'd need."

"For instance?"

"Well, underneath your recipe for biscuits, you could tell them how to incapacitate a burglar with an overhand throw to the head."

"Be serious."

Don started chuckling. "Of course, if you include the recipe for Green Gumbo, you could tell them to just leave a bowl-full and a spoon out where the burglar can find it. One taste of that, and he won't be going anywhere. You could even rename it 'Burglar's Bulimia'" He doubled up laughing.

"Very funny," I said. Then I smiled. "In spite of your twisted sense of humor, you may have just given me an idea of what to call my book."

"Oh?" Don asked, reaching for his handkerchief to wipe tears from his eyes. "What's that?"

"The Party-Time Security Handbook."

"Good idea. Just make sure it's a big, fat volume. That way, if the security tips don't help, and the recipes don't kill him, you can always bash the burglar with the book." **TNL**



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Reed Report

Just returned from the Detroit seminar and it was just about as perfect as perfect could be. My thanks go out to John Hubel and Fran Katz. Very seldom do we go in and everything is exactly as ordered, however, everything was EXACTLY as ordered. Not only did they take care of all the arrangements for the class facilities, but they fed the more than 100 locksmiths that attended.

The Locksmith Security Association of Michigan is truly one of the leading associations in our country. They are devoted to education and back it up with results. I am going to use questions I received at this show for my column this month.

Q. Are authorization forms necessary to use to avoid a law suit?

A. They are good to use, but not legal. In some legal cases the judge has ruled that: "There's no such thing as an authorization form to commit a crime." However, they immediately come back with: "Keep using them because it shows you are honest and attempting to do the right thing."

Q. I recently split a door while installing a lock. Will my bond cover this?

A. No. What you need is called liability insurance. The bond is used only if you commit a crime and go to jail. At that time the bond will pay any losses up to the bond amount incurred by the victim. This is, without a doubt, the most misunderstood thing in our business.

Q. What is a control key?

A. The key used to remove the core from an interchangeable core lock.

Q. What are resistor pellets?

A. All VATS keys are fitted with resistor pellets. They are embedded in the key above the shoulder. There are 15 different pellets that have been designed for the VATS (vehicle anti-theft system). Each of the different pellets has a different resistor value. When the key is cut correctly and inserted into the lock and turned, the pellet makes contact with two electrical contacts in the plug.

Scatter Shooting while wondering whatever happened to . . . Larry McCall?

Q. I want to study the fire codes in my community, but I don't know where to get them. Can you help?

A. You can usually purchase the fire codes from The National Fire Protection Association or you might be able to get them from your local city/ state governments. I strongly recommend you get a set and study them closely. When you get a job and are familiar with the codes its very impressive to your customer, not to mention you'll know what's legal and illegal.

Q. What does A.S.I.S. stand for?

A. American Society for Industrial Security.

Q. What are the two most popular electronic locks being used by hotels?

A. This is no more than a guess, but I would say VingCard and Saflok. However, keep an eye on Ilco. They are coming on very strong.

Q. What is the oldest lock shop in America?

A. Again, just a guess, but I would say Websters in Memphis. I am sure someone out there disagrees with me, so let me know and we will start researching it. Send me the name of your shop and the date it was first opened. Multiple owners through the years are O.K., but the shop must have been open and operating without interruption. Maybe I will talk Marc Goldberg into giving a new car or something to the winner, (Just kidding Marc). I think we can come up with a prize for the winner if we can prove they ARE the winner. We'll discuss that later. We will have fun in the meantime, anyway. **TRM**



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Bill Reed

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If your tip is chosen as the best tip of the month, not only do you win the All-Lock A-6200 Auto Service Kit, but you also automatically qualify to win one of the many excellent year end prizes!

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by
Jake Jakubowski

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- Tech-Train Training Video
- Sieveking Products EZ-Pull GM Wheel Puller
- Major Mfg. Products
- The Sieveking Auto Key Guide

Earlier this year, I had the opportunity to talk to a couple of you by telephone and I was asked where you could obtain tools that were mentioned in an earlier Technitips column. In both instances - as it will when two locksmiths begin talking to each other - the conversation quickly turned to the nuts and bolts of locksmithing.

Many callers seemed surprised to find out that I am a "real" locksmith. Many are unaware that I make my living the same way most of you do. I rekey locks, install panic hardware, open safes, unlock cars and do all sorts of locksmith things every day of the week!

Writing for *The National Locksmith* magazine and editing the

Technitips column each month is my avocation. And, it is the practical locksmithing experience that I gain each and every day, that allows me to pursue my avocation as a writer.

In that respect, I'm not unique - not by a long shot. The majority of the writers for *The National Locksmith* (Carl Cloud, Sal Dulcamaro, Steve Gebbia, Gene Gentry, Michael Hyde, Giles Kalvelage, Dale Libby, Dave McOmie, Don and Sara Probasco, Bob Sieveking, etc.) are all "real" locksmiths that practice their chosen profession on a full-time basis. Even Greg Mango, our managing editor, is a "real" locksmith (about fifteen years worth) before he joined the National's staff.



Photograph 1.

What all of that means to you, the reader, is: The experiences that the writers of *The National Locksmith* magazine relate in their articles are real life, real time experiences.

Of course, that shouldn't be a surprise to you. It's that kind of experience that Marc Goldberg has sought out ever since he began publishing *The National Locksmith*. And, it's that kind of experience you demand from the writer's of which

I'm proud to be a part of. I'm also proud to be a real locksmith. But, most of all, I'm especially proud of all the "real" locksmiths out there that send me their tips, tricks and ideas every month. The reason I am so proud is because it's real locksmiths like you that help me write such a high quality column every month (See, I'm humble too!) for the greatest magazine in the "business." That's truly a real experience. See y'all, next month. Y'all heah me, now?

ALL LOCK WINNER: **Converting A Kent Moore Interrogator**

For those of you who own the Kent-Moore Vats Interrogator (single sided only), you'll be pleased to know there is an economical and easy way to convert your Kent Moore to a dual reader for under ten dollars and less than twenty minutes of your valuable time. *Photograph 1*, shows a K/M converted with a double sided GM key inserted for interrogation.

Simply purchase ALL LOCK'S LT7006 Double Vats Adapter from your favorite distributor for under ten bucks - which is less than a third of the cost of a Kent Moore adapter kit - and follow the easy directions below.

To install the All Lock LT7006 on a Kent Moore interrogator, remove the four screws from the face of the unit. Remove the clamp and the two screws on the back side of the face plate that holds the GM plug. Use a small soldering iron to remove the two leads from the circuit board and the remove the GM plug.

Now install the All Lock LT7006 adapter. The LT7006 will fit slightly off center since the GM plug's ears are slightly off-set where the LT7006 is not. However, one screw will secure the All Lock adapter and hold it in place. If you want to use both screws, you'll have to carefully enlarge the holes in the face plate slightly.

Now reassemble the unit, including re-soldering the appropriate leads, etc. and your Kent-Moore interrogator will now read double sided Vats as well as single sided.

Norman E. Most
Texas

[Editor's Note: Russell Alsbrook, National Sales Manager for ALL LOCK tells me that Norman's tip is a legitimate tip and it will work as Norman states. For those worried about voiding the warranty on your Kent-Moore by making this conversion, the chances are if you have the older version, the warranty has already expired anyway. My thanks to Norman and Russell.]

AMERICAN LOCK & SUPPLY WINNER:

Permanently Mounting Sectional Trim

A problem a locksmith will often encounter on wood door preps for full mortis locks is loose sectional trim. This problem is often due to the thinness of the door material that is



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left after completely mortising the door to accept the lockcase. Because there is so little thickness left, there is very little wood to hold the mounting screws that hold the trim in place.

Here is a simple, cheap and proven method for securely and permanently mounting sectional trim such as knob roses, turnpieces, occupancy indicators, latch guards and other hardware under less than ideal contains.

Remove the lockcase and drill through each of the desired mounting hole locations and insert a "T" nut (see *Illustration A*) of the appropriate size inside the mortis cavity. Then using a machine screw (usually a 6/32 or an 8/32), cut to the proper length and attach the required trim to the face of the door.

I have found that oval, Phillips head machine screws in brass or stainless steel, depending on the locksets

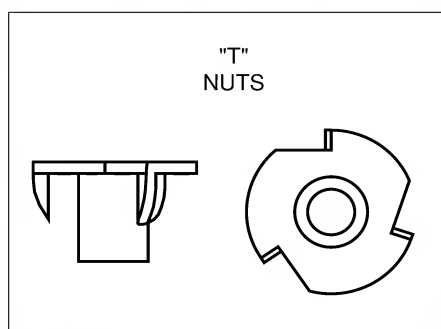


Illustration A.

finish, will give a professional appearance to the completed installation. You need to use machine screws to fit the "T" nuts since the mounting screws that come with the lockset have a coarser thread than the "T" nuts.

You can obtain "T" nuts in many hardware stores or at any machine shop supply house.

Peter P. Schifferli
New York

**HPC PISTOL PICK WINNER:
Opening and Decoding a Master
#175**

A Master #175 Resettable combination Padlock was recently brought into my shop with the combination lost. I had a tool that I had ordered that was supposedly made to open this type of padlock quickly. No such luck.

After fooling with the lock for more time than I should have, I decided to find out what makes this particular lock work. I took a brand new 175 off

the shelf and cut it in half so I could see the mechanism and figure out how to get into the one the customer brought me. I know that sounds like an expensive way to solve a customers problem, especially on a padlock, but for my own satisfaction I wanted to see if I could figure out how to open this lock and then decode the same, etc.

What I came up with was a modified Weiser shim pick that I bent around a 1/2" plug follower so that it looked somewhat like a candy cane. the "hook" on the cane was about 3/4"

in diameter (see *Illustration B*).

As also shown in *Illustration B*, insert the curved end of the tool into the gap above the first wheel (The Master logo will be on your left) so that the shim follows the diameter of the wheel. Push in on the shackle of the lock and then push the shim in, all the way, until it stops on its shoulder.

Release the shackle and the lock is open. Now that the lock is open, the reset keyway is also open, which is possible to reset the combination once you have determined the existing combo.

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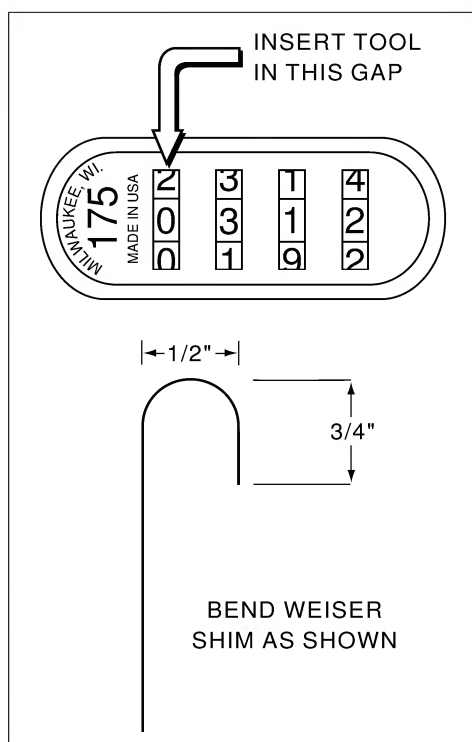


Illustration B.

To determine the existing combination, the first step is to get the change key to turn. Do this by pushing in hard on the key and turning it while randomly rotating all the wheels with your thumb until the key turns. This should only take a few seconds and seldom ever more than a minute or two.

Next, leave the key turned and set all the wheels to zero. Then remove the key and get out a pencil and paper.

To actually decode the combination, turn the first wheel to "1," insert the key and see if the key will turn. If the key will turn, take it out and turn the wheel to "2," insert the key and see if it will turn, repeat the procedure until the key does turn. What's going to happen is the key will turn on three different numbers. Two of those numbers will be sequential, 1-2, 5-6, 8-9, etc. and one will not be sequential. For instance, on your number one wheel you get a reading of 3-4 and then 7. Seven is the number for the first wheel. Repeat this sequence for the next three wheels until you have determined the existing combo for the lock.

Remember to take the key out after each step and to leave the wheels that you are not working set on "0." If you don't take the key out each time, you'll risk resetting the combo before your ready to and will have to repeat the whole exercise.

After testing the lock for the combination you have decoded, you are ready to reset it to a different combo, or return it to the customer.

Shane Maloney, CM S
Canada

[Editor's note: Over the last couple of years, I have printed several tips on opening and decoding the Master 175. Shane's tip is printed for the same reason the others were: to give readers another means of accomplishing a given task. However, from a strictly personal point of view, when it comes to servicing lockouts on padlocks, I'm quick - with certain exceptions - to reach for the "pinch pick" (bolt cutter) unless the customer understands that the service I perform could easily cost more than a new lock. Of course, there have been instances where I, like Shane, just had to prove to myself that I could "do it to it". Thanks for a good tip, Shane!]

SARGENT AND GREENLEAF WINNER: GM Ignition Removal

With a little patience and practice, you can remove the new GM ignition cylinders without investing in some of the drill rigs or pick sets that are offered by many suppliers. To do so, follow these easy steps to a new key.

Remove the trim ring or bezel from around the ignition cylinder. This ring comes off very easily with just a little gentle prying. Remove the Torx screws that hold the bottom of the shroud on and then swing the shroud off of the rear clips. At the 9 O'clock position - when looking at the keyway - you will see a small gap. Using an old pick or piece of spring steel, slide it into the gap. This becomes your tension tool to put pressure of the lock's sidebar.

Now rake the wafers with a pick while putting tension on the sidebar. You can feel it when the sidebar depresses all the way. Now use a small screw driver in the keyway to begin turning the switch to the "On" position. You have to remove the "tension" tool as you turn the switch to the on position.

Now you can either remove the upper shroud to depress the retainer and remove the lock for making a key, or you can purchase a tool like Tech Train's cylinder retainer depressing tool. The code is stamped on the lock cylinder.

Once you have made the first key, replace everything and snap the trim

ring back over the face of the ignition. With a little practice, you can do this job in fifteen minutes or so.

Robert Gardner,
E-Mail

SILCA KEY BLANKS WINNER: Easy Weiser A630 Thumb Piece Alignment

We seem to run into more than our fair share of A630 Weiser Handle sets in our service area. After rekeying one of these units, trying to re-install the locking unit often turned nightmarish because of the difficulty in trying to blindly align the tail of the thumb piece with the hole on the retractor.

As you try to re-assemble the unit, the hole on the latch retractor would slide to the side making the alignment of the two pieces nearly impossible unless you had the luck of a lottery winner!

After much frustration, trial and error, here's how we solved this tricky alignment problem:

As soon as you remove the locking unit from the back of the handle set, clamp the locking unit in your vise. Measure down 2-1/8" from the narrow end of the unit (see Illustration C). Drill a 3/16" hole from the backside of the unit through to the latch retractor. By drilling from the back, you prevent drill shavings from falling into the locking mechanism.

Now, to quickly and easily re-install the locking unit on the handle body, just use any small probe-type tool through the back of the unit to maintain alignment of the retractor in the center of the slide opening. You can also observe the tail piece of the thumb latch sliding into its proper position.

Believe me! This works the first time, every time!
Bob Scott,
Florida

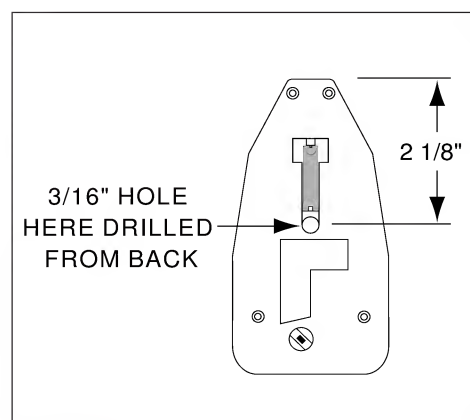


Illustration C.

**PRO LOCK PICK SET WINNER:
Capri Key Blank Modification**

Cutting a key by code for an automobile usually saves the locksmith time and headaches over impressioning, progressioning, etc. However, cutting a key by code for Mercury Capri (1991-1994, Code Series 6500—7733) can be the exception to the rule.

My available information calls for an X202 blank (Ilco's key blank and number) but if you cut the key on this blank, you will have a key that works everything with the exception of the ignition.

This is due to the raised blade design near the bow that stops full insertion of the key into the ignition by approximately 1/16", even though the blank will pass all the other locks without a problem. (see *Illustration D*).

To allow the X202 to operate the ignition, mill, or file, the shaded areas of the blank as shown in the illustration. I have not found this to be a problem on any other Ford/Mazda's that use the X-202 except the one used on the Capri. Also, Silca's version of this keyblank does not have the raised area on it.
Jay Metzbowser
Maryland

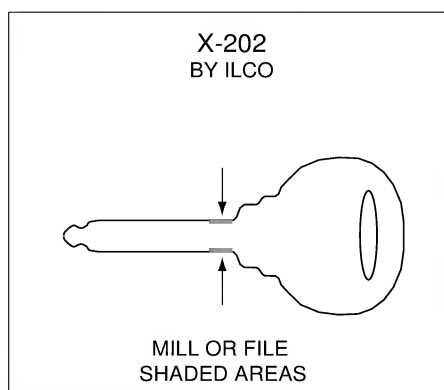


Illustration D.

**TECH TRAIN VIDEO WINNER:
A Bright Idea For Wafer Reading**

I found that I needed a good light to read the wafers in a Ford Ten Cut door lock, especially the ones that are difficult to take off of the door. I have tried a variety of lights to help read the wafers, but none seemed to do the trick for me.

While in a gun store, I found a light that is put out by Browning that is used to look down the barrels of guns. It has an "L" shaped lexan light that I filed down to a tip that fits straight into

the top of the keyway of Ford door locks. It even holds the shutter open, and it lights up the whole keyway.

If you don't want to spend twenty bucks for the complete light, just buy the bulb for about \$2.00 and use the rubber tip of a spark plug wire and fit the other end of the rubber over your own MAG light.

This simple item helps me to quickly make keys for these locks by sight reading the wafers. As far as I'm concerned, it sure beats trying to remove the lock from the door and decode it.
Lance D. Ross,
Texas

[Editor's Note: For those that might find wafer reading to difficult, H. E. Mitchell Co. - 1/800/626/5625 - has a product called E-Z-Reader which allows you to read the wafers in a Ford 10-cut with the use of a simple to use tool. I have one and have found it to be invaluable on occasion. H. E. Mitchell also has E-Z Readers for other wafer locks as well. Give 'em a call!]

**SIEVEKING GM E-Z PULL WHEEL
PULLER WINNER:
Automatic Staking Tool**

I've read several tips in your column that mentioned Automatic

medeco[®]
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Center Punches and what versatile tools they are. Here's a tip for converting an Automatic Center Punch to a staking tool for GM lock cylinders and other cylinders that have retainers that require staking.

As shown in *Illustration E*, this Automatic Center Punch comes with a pointed tip for marking drill sites, etc. If, as shown in the illustration, you file or grind the tip down as shown, the punch can now be used to stake GM spring caps and side bars.

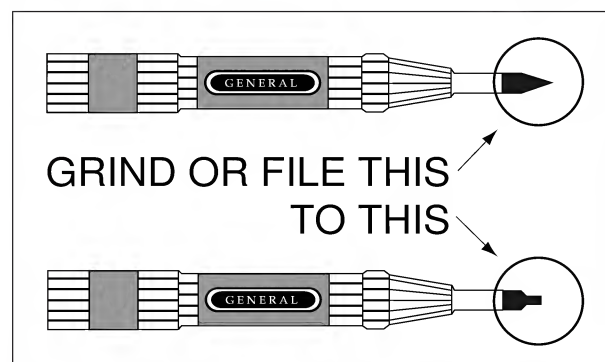


Illustration E.

The tension of the punch is adjustable from light to heavy, which makes it ideal for a variety of staking requirements. Also, since you can use the punch with one hand, the other hand is free to hold the cylinder or retainer cap, etc.

As far as I'm concerned, if you do any amount of GM work at all, this modified Automatic Center Punch is a "must have" tool.

Rick Rogers,
Colorado

**MAJOR MANUFACTURING WINNER:
Schlage Attaching Screw
Template**

As most of you are probably aware, Schlage deadbolts, like most deadbolts, have an actuator bar (tailpiece) that can break rather easily due to too much torque being applied by the key. This can be caused by a mis-aligned door, weather stripping that has been applied too tightly to the door, building settling or any number of reasons.

Regardless, the results are the same: a lockout. And, if the actuator on the outside cylinder of the lock is the one that breaks, you don't have much recourse except to drill the lock if you can't find another way into the premises.

When trying to drill for the mounting screws on Schlage or other types of deadbolts, it is easy enough to be slightly off the mark, which of

course slows you down and can look less than professional.

What I have done to prevent this is use an interior cylinder housing as a drill guide. Simply place the face of the interior cylinder against the face of the exterior cylinder and make sure the cylinders are aligned around their circumferences. Now use a 1/8" bit in your drill motor and insert the bit through the mounting screw holes of the interior cylinder. Nudge the drill motor trigger to "mark" the drill site of each mounting screw hole and set the interior cylinder to the side.

Now, drill on your marked drill sites straight through the outside housing. Most of the time, you'll "walk" the mounting screws right out of the lock. That turns your lockout into a quick and profitable job.

Chris Weber
Florida

**SIEVEKING AUTO KEYBLANK
REFERENCE WINNER:
Taurus Back Seat Access**

I had a customer that locked her keys in the trunk of her 1996 Ford Taurus. This vehicle has the new wider keyway, and when I tried to pick it, I found that I did not have a tension wrench wide enough to apply tension on the keyway.

Looking for another way to retrieve the customer's keys, I unlocked the driver's side door hoping to find a trunk release button by the driver's seat or in the glove compartment. No such luck.

However, what I did find was a seat release on top of the back seat. I activated the release, popped the seat and pulled out my customer's keys.

Randy Gregory,
Oklahoma

[Editor's Note: The keyway that Randy mentions is much wider than previous Ford keyways and the first one that I encountered threw me a curve for a second. However, I just happened to have an A-1 No. 24 Adjustable Tension Wrench in my pick case which solved the problem very nicely. You can obtain your very own A-1 No. 24 Adjustable Tension Wrench from your favorite supplier for about \$15 to \$18.]

**JAKE'S GRAB BAG WINNERS:
Welding Rod Opening Tool**

I used a piece of .170" X 48"

welding rod to make an opening tool for use on vehicles that have hidden or difficult to reach linkages and bell cranks inside their doors.

I bent one end 90 degrees one inch from the end and bent the other end 90 degrees two inches from the end. Then, I smoothed the ends so they wouldn't catch on any fabric or trim inside the car.

I can insert the tool into the car from the upper rear corner of either door (using a little lubricant on the tool helps it slide through the weatherstripping). The length of the tool helps it reach the slide button, lock button and even the door handle on vehicles that will unlock by pulling the door handle.

I have used it on many '96 GM's and later model Nissans and Toyotas. I am sure the tool will work on other models as well. It's cheap too!

Don Dodson,
North Carolina

Plug Followers Galore

I'm sure every locksmith needs plug followers and often does not have enough of them. The most common sized follower is .500". Here's an economical way to get more than enough followers for your shop and service vehicles..

Go to a builders supply house or a plumbing supply house and buy a length of 1/2" copper tubing. Cut it up into three, four or five inch lengths, smooth off the burrs and you have several very good and inexpensive followers.

You can also cut or file the ends for different configurations of plugs.

Fred Gamble,
Texas

Infinity Q45 Trunk Popping

If a customer has locked their keys in the trunk of their Infinity Q45, open the locked door and push the trunk release button in the glove compartment. The car does not have to be running or the key turned on to activate this lock. Just push the release button in.

If the glove compartment is locked, just pick it open. It turns to the left. Even though the key for the glove compartment is "High Security" you can pick the glove box with very little effort.

Louis Kambeitz
California

TNL



Name That Safe



by
Dale Libby

I just received *The National Locksmith* magazine and read what some people do before opening a safe. They research the heck out of the unit, and then, by the numbers, they attack the safe. That is NOT the way I started out with many of my cronies.

Safe and Vault opening is a lot of work, but most of the thought process has been eliminated, due much in part to the excellent reference material available by Dave McOmie, Ed Willis, Harry Miller, and myself. With these books, manuals, and information sources, safe opening becomes more or less a job, and not an adventure.

In the "Old" days, I had only one reference manual to my name, the HPC Safe and Vault Manual. Most of the time I used this venerable book to eliminate rather than to verify what safe I was working on. What ever the manual said I should see, I took as a grain of salt, for most times the configurations I saw were some-what different than what was pictured in the "Book" that had not been changed for 50 years.

As with all my current safe books and reference materials, I have written

in many minor differences in shape and measurements that I have encountered when necessary, and you the reader are the reason. I see many of the procedures that I have touted over the years taken up by newer and younger safemen as something new that they have found out. I could give you a list of many concepts that I have pioneered that have been taken from articles that I have written. No problem, but I would at least like a footnote. Oh well.

The point of this article is to have the safemen, new and old, think about how they are going to open any particular safe before going and looking it up. This is especially true with older safes. New safes are all pretty much standardized so drilling is no problem, not counting glass plates.

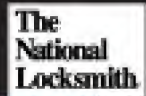
When I go and open a locked car, I do NOT do massive amounts of research. First, if possible I try to pick the lock. You will be surprised at how many of these cars (including GM 10 cuts) can be easily picked open without too much hassle. If that fails, I try for a logical linkage point attack. If that fails, I look it up and get the car open. Rarely do I have to use a light,

except on the more high security vehicles.

The same is true on safe/ money chest openings. Use logic and experience to guide you. Sometimes you will be wrong, but one learns from one's mistake. Boy, have I ever learned a lot in 35 years of safe opening. Again, safe opening is an adventure. The point of this article is to show you a couple of "fooler" safes that cannot be easily looked up. If you are counting on your books only, then you would have to refuse the job, for the safes shown might not be in your reference materials.

I have a friend in Big Rock (no kidding) Illinois that does a lot of business with my company. I have never been to his place, but he runs an industrial crane and moving business. Every couple of months, Bob brings a couple of old safes to my place on a trailer. He leaves the safes with me until I have time to open them.

After I complete the opening of the units that are left, Bob picks up the open safes (with the lock mechanisms removed) and repairs and patches up any scratches, dents, or holes in the doors or bodies. A month later, he



returns the door I have worked on with the lock mechanisms. I then reassemble the doors and he takes them back to his shop.

The lock dials and rings are restored and re-plated by his brother. The safes are then painted with either high tech colors or to his theory of what looks good and new/ old.

Bob buys these safes for basically nothing, carts them to my house where I open them. I charge him a bulk rate for opening safes. When he brings the doors back, I charge him for re-assembling the locks and making sure everything works well.

His deal is that he spends about \$300.00 per safe, plus whatever it costs him to have them painted and plated. He then sells said safes for about 300% to 400% markup. He takes the completed safes all over the country to swap meets and large flea markets. He may take up to 8 safes at a time on his large trailer, and he has never failed to sell these "Old Boat Anchors" in the first day of the show. Even though the units in question are old, the restoration is so good, that he has no problems selling them.

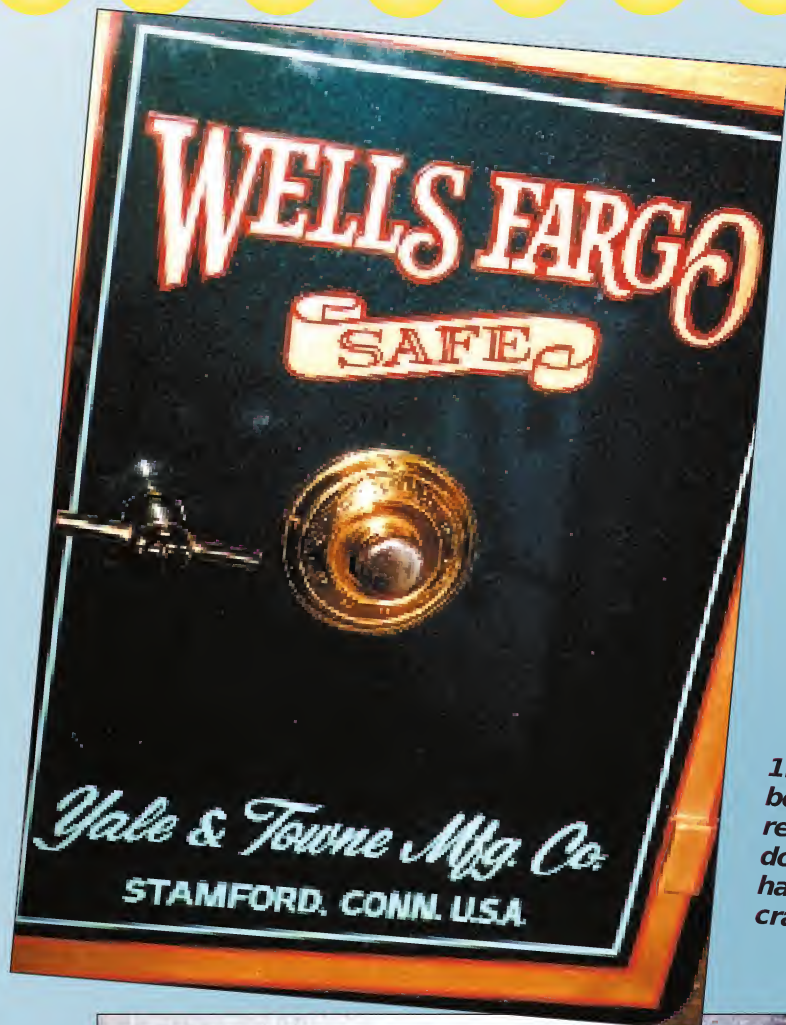
The only problem he has, is that all his relatives want to have a restored safe in their house too. His profit is not nearly as good with his relatives.

In Photograph 1, you see the dreaded Wells Fargo Safe, fully restored. The dial is plated brass, the knob is stainless steel plated. The handle is the "T" variety with a flat face. Putting pressure on the dial I noticed NO pressure on the wheel pack. I correctly surmised that it was a Yale OB type lock. When I first worked on the safe, there was no name on it, and the dial was mostly unreadable and covered with paint.

By using a drop in area enhancer ("The WASP" Tool) I was able to manipulate the safe open in about 15 minutes. An easy opening I did not have to look up, nor could I have.

Photograph 2, is a shot of the interior of the newly painted Wells Fargo safe. Would you have thought that this was the locking mechanism in this container if you had to open it?

Next, in Photograph 3, I show a Immeron Blue metal flake door that I opened. There was absolutely NO markings on the safe or door. The



1. A beautifully restored safe done by the hands of a craftsman.



2. The locking mechanism on the freshly repainted Wells Fargo safe.

hinges might have shown me something, but before I did this, I just put pressure against the "T" handle and noticed an appreciable drag against the wheel pack. Mystery solved, it was a direct drive type safe.

After getting the unpainted door open, I was surprised to see a configuration that I have not seen before. Once again, with no information about the safe, I easily opened it with logic and straight line manipulation.



3. An eye popping blue immeron safe that didn't look nearly this nice originally.



4. A very unusual locking system that I have never seen before.

Photograph 4, shows the unusual type of straight line mechanism that was in this unit. The drop in is at 11:00 o'clock from the front of the safe. When the wheels are lined up with the opening bar and the handle is turned, the wheel pack moves about 18 numbers including the last number.

Interesting mechanism.

The point of this essay is to trust your instincts when opening safes. Sometimes your instincts will be wrong, so have the number of a more experienced safeman handy to help you out. Offer to carry his tool boxes

so you can help, learn, and observe some new or more advance techniques in safe opening. If you find a safe you cannot work on, if you feel confident, do it. If not, there is no shame in calling for help. OPEN and PROSPER !!! **TNL**

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KEY CODES

GM Code Series continued AA00-A999

HPC 1200 CM

Code Card - CF215

Cutter - CW1011

Stop - 1054R Tip Stop (Ford 10-Cut)

Framon

Cut start - .216"

Cut to cut - .092", Spacing Block #3

Cutter - FC8445

Key Clamping - Lay spacing clip

F2MS552 flat on left side of vise and align from tip.

Curtis

Cam - GM6

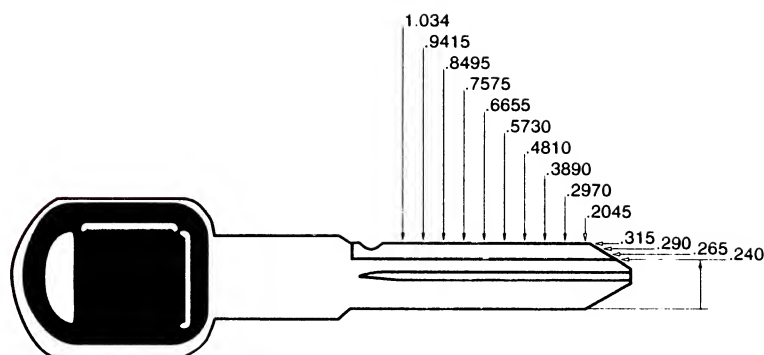
Carriage - GM6A

KEY BLANKS

B&S 5995936
Silca GM37(EP)
Curtis B82
Ilco P1102
Jet B82(PH)
EZ B82
ESP B82

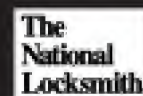
Spacing and Depths using
Universal Micrometer
Card #58.

	Spacing	Depth
1	.1850	.315
2	.2775	.290
3	.3700	.265
4	.4625	.240
5	.5550	
6	.6475	
7	.7400	
8	.8325	
9	.9250	
10	1.0175	



Key
Profile

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A002	1131232124	A045	1123443432	A088	1131324234	A131	1132132424	A174	1124231132	A217	1131242344	A260	1124343224
A003	1131342322	A046	1131221244	A089	1124323424	A132	1123432124	A175	1131221233	A218	1124221333	A261	1123432313
A004	1131223313	A047	1124221343	A090	1123433444	A133	1131324332	A176	1132124434	A219	1131212422	A262	1124313222
A005	1131343122	A048	1132123244	A091	1124213442	A134	1132113442	A177	1124311323	A220	1124232324	A263	1132131334
A006	1124432113	A049	1124343123	A092	1124212322	A135	1132121232	A178	1124423244	A221	1131212433	A264	1123423242
A007	1131322133	A050	1131231233	A093	1123442322	A136	1124434313	A179	1123433213	A222	1124232213	A265	1131234213
A008	1132122444	A051	1131233242	A094	1124422444	A137	1123422433	A180	1124334222	A223	1131234233	A266	1132212444
A009	1132121233	A052	1131342124	A095	1124322113	A138	1124233432	A181	1124311244	A224	1124231133	A267	1124243124
A010	1131313324	A053	1124242244	A096	1131124243	A139	1131233432	A182	1132112444	A225	1123443223	A268	1132132442
A011	1124431324	A054	1131331222	A097	1124211322	A140	1124232422	A183	1124234223	A226	1132131233	A269	1131242334
A012	1124433423	A055	1131312432	A098	1131231343	A141	1132134224	A184	1124313234	A227	1124312242	A270	1131342132
A013	1131213342	A056	1131231224	A099	1131334233	A142	1124231224	A185	1124243112	A228	1124331344	A271	1124221243
A014	1131233434	A057	1131221342	A100	1131134224	A143	1131342123	A186	1131124434	A229	1124344232	A272	1131133422
A015	1124433112	A058	1131343313	A101	1124432432	A144	1124433422	A187	1132212324	A230	1131312243	A273	1132113324
A016	1124324342	A059	1131224322	A102	1131224243	A145	1132123133	A188	1132132444	A231	1123442133	A274	1124424323
A017	1131322433	A060	1131223344	A103	1132131344	A146	1124424332	A189	1132212322	A232	1132133432	A275	1132211242
A018	1124433212	A061	1132133422	A104	1131344324	A147	1123422344	A190	1131224323	A233	1124234242	A276	1131231242
A019	1124232433	A062	1131244334	A105	1131134334	A148	1131321232	A191	1131243134	A234	1131223122	A277	1124313233
A020	1124334323	A063	1124221124	A106	1132122344	A149	1124323422	A192	1132131242	A235	1131334242	A278	1132134223
A021	1123442122	A064	1123422344	A107	1132133123	A150	1132113323	A193	1132122334	A236	1124224234	A279	1124211334
A022	1132112433	A065	1123424333	A108	1124343133	A151	1124421322	A194	1124221344	A237	1131243122	A280	1132132432
A023	1131122334	A066	1131232132	A109	1131342213	A152	1124231212	A195	1123424244	A238	1132133234	A281	1123431233
A024	1132122324	A067	1123423313	A110	1131123224	A153	1131324434	A196	1124321134	A239	1123431323	A282	1124221312
A025	1124421323	A068	1132112322	A111	1131313322	A154	1124231244	A197	1124313244	A240	1131124342	A283	1131124324
A026	1124332343	A069	1124432234	A112	1124344213	A155	1124434234	A198	1132212244	A241	1131343123	A284	1124233242
A027	1123432122	A070	1124224334	A113	1124243424	A156	1124431343	A199	1124234422	A242	1131223342	A285	1131323122
A028	1124423432	A071	1124323442	A114	1123423113	A157	1131342423	A200	1131232234	A243	1124223113	A286	1124242233
A029	1131244224	A072	1132133212	A115	1123424322	A158	1131212334	A201	1124312234	A244	1124322344	A287	1131313433
A030	1124324334	A073	1124421133	A116	1124242332	A159	1123443112	A202	1124221342	A245	1132124424	A288	1131234344
A031	1124343234	A074	1124424324	A117	1123432344	A160	1124421344	A203	1131223244	A246	1124233213	A289	1131213224
A032	1124311324	A075	1131334323	A118	1131312333	A161	1124242322	A204	1123434232	A247	1124321233	A290	1123432123
A033	1132122132	A076	1124343423	A119	1131344322	A162	1131132422	A205	1124424232	A248	1124312424	A291	1123424433
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A035	1124431133	A078	1124233423	A121	1131324232	A164	1124233113	A207	1132121344	A250	1124321323	A293	1131122343
A036	1124431312	A079	1132112423	A122	1131322313	A165	1124424342	A208	1131124422	A251	1124323432	A294	1124322324
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A038	1124424424	A081	1131242124	A124	1132132422	A167	1124423124	A210	1131132433	A253	1131322443	A296	1131223243
A039	1124343134	A082	1131331344	A125	1124432443	A168	1124343132	A211	1131242342	A254	1131332234	A297	1124424223
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A042	1123422442	A085	1124243132	A128	1124242122	A171	1132131343	A214	1124433134	A257	1124334423	A300	1132131243



GM Code Series continued

AA00-A999

A301	1124323224	A382	1124421213	A463	1131313432	A544	1131324312	A625	1124223242	A706	1131134242	A787	1124231332
A302	1124223344	A383	1132212133	A464	1124231222	A545	1132131342	A626	1132113342	A707	1131244213	A788	1131242434
A303	1131232324	A384	1124432424	A465	1131233442	A546	1131223213	A627	1131344212	A708	1132132344	A789	1124424233
A304	1124311243	A385	1131322132	A466	1124312324	A547	1124432433	A628	1124323112	A709	1124224232	A790	1124342242
A305	1123431132	A386	1124313134	A467	1124231313	A548	1124322432	A629	1124232133	A710	1124432343	A791	1123433134
A306	1132124334	A387	1131233444	A468	1124231134	A549	1124332432	A630	1123433242	A711	1124423342	A792	1131324433
A307	1124431122	A388	1124232432	A469	1124311232	A550	1124423312	A631	1132211343	A712	1124224244	A793	1124224213
A308	1124244222	A389	1124211333	A470	1132212213	A551	1124231312	A632	1131124424	A713	1124322434	A794	1124332134
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A312	1124331323	A393	1131234424	A474	1123422432	A555	1132131232	A636	1124321124	A717	1123433243	A798	1131134233
A313	1124242434	A394	1131134442	A475	1124244323	A556	1124234432	A637	1131212322	A718	1132134313	A799	1124233422
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A315	1124243122	A396	1131313344	A477	1132212422	A558	1124334422	A639	1131242313	A720	1132213122	A801	1131242134
A316	1131323424	A397	1124331133	A478	1132122313	A559	1132123344	A640	1124421132	A721	1131322123	A802	1131243423
A317	1131123243	A398	1131323213	A479	1124424432	A560	1131312442	A641	1132122124	A722	1124231122	A803	1132122134
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SECURITY TESTS ANSWER KEY

General Security Test Answer Key:

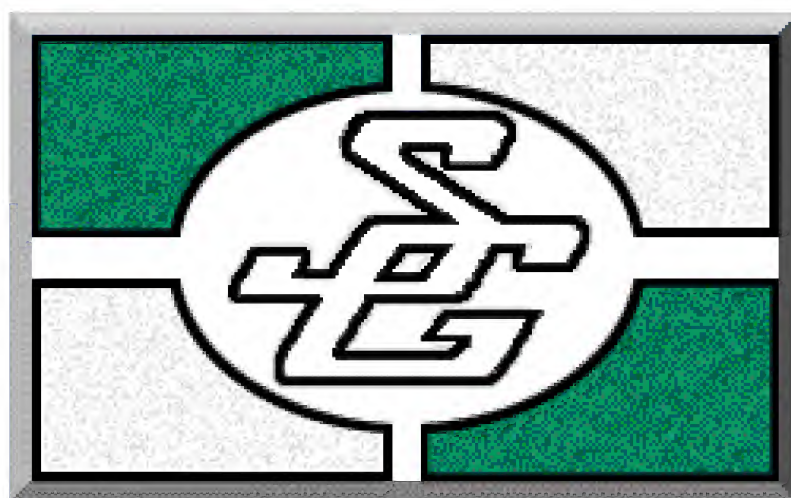
1. A
2. B
3. B
4. C
5. A
6. A
7. A
8. A
9. B
10. B
11. A
12. B
13. D
14. A
15. A
16. B
17. A
18. D
19. B
20. A
21. B
22. B
23. A
24. B
25. B

Automotive Security Test Answer Key:

1. D
2. B
3. B
4. A
5. C
6. B
7. B
8. B
9. A
10. D
11. A
12. A
13. B
14. B
15. B
16. C
17. C
18. C
19. A
20. B
21. A
22. B
23. A
24. A
25. A

Electronic Security Test Answer Key:

1. A
2. A
3. B
4. A
5. B
6. B
7. A
8. A
9. B
10. A
11. B
12. A
13. A
14. A
15. A
16. D
17. B
18. A
19. A
20. B
21. B
22. B
23. A
24. A
25. A



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Comptronic locks your choice for
electronic safe locking solutions.**

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TEST DRIVE



**Taking Industry
Products for a Spin
Around the Block**

EXIT STOPPER BY STI



The Exit Stopper is a completely self-contained door exit alarm device which provides an inexpensive way to help prevent unauthorized use of fire/emergency doors. The device was specifically designed for those smaller business that do not require expensive panic-bar door hardware, but still must leave an exit door unlocked during working hours for safety's sake and to comply with fire codes. The unit comes complete with screws and anchors for mounting and a keyed switch for easy deactivation. If a door equipped with an Exit Stopper is opened, a piercing 120 decibel horn sounds for approximately three minutes. The unit can be turned off at any time by the double sided key switch located on the front of the unit.

INSTALLATION: To install the Exit Stopper, the cover housing must be removed by unscrewing the two tamper proof screws on the face of the cover. A special tool is provided to accomplish this task. Mount the unit with the hardware provided on the door to be monitored. Next mount the provided magnetic contact on the door frame within an inch of the Exit Stopper Reed switch. The Reed switch can be positioned at either the 12:00, 3:00, 6:00 or 9:00 position. Once the magnetic contact is mounted, replace the Exit Stopper cover and test unit. The Exit Stopper can also be mounted to a wall with the magnetic switch mounted to the door if desired. Installation time is about ten minutes.

FEATURES: The Exit Stopper is

DESCRIPTION:
Exit Stopper by STI.
A low cost
fire/emergency exit
door monitor.

PRICE:
\$91.00

TEST DRIVE RESULTS:
Very easy to install, allowing
a number of mounting
possibilities. 120 decibel
alarm is ear piercing and
effective.

primarily constructed of a sturdy fire-resistant polycarbonate plastic shell 5 inches wide by 5 inches tall by 2 inches deep. The device is bright red in an octagonal stop-sign design which acts as a deterrent in itself. Power is supplied by one 9-volt alkaline battery. When the battery is low, the unit will beep to indicate low power. Once the Exit Stopper is triggered, the 120 decibel horn will sound for three minutes and then reset. The reset feature can be eliminated by cutting a white jumper wire on the circuit board allowing the units horn to continue sounding until the battery is exhausted. The Exit Stopper is available in three models: The STI 6400 Exit Stopper; the STI 6402 Exit Stopper for Double Doors; and the STI 6403 Exit Alarm with Remote Horn.

CONCLUSION: The Exit Stopper is an effective way to monitor a fire/emergency exit door. The unit can be easily installed and removed if necessary, and will send a piercing signal when triggered. The Exit Stopper is not limited to fire/emergency doors however. It can be used on any door that one wishes to monitor.

Suggested retail price for the Exit Stopper is \$91.00. For more information on the STI Exit Stopper, or any of the other fine STI products, call: 800-888-4784 **TNI**